

Meeting of the Federal Open Market Committee
March 31, 1998

A meeting of the Federal Open Market Committee was held in the offices of the Board of Governors of the Federal Reserve System in Washington, D.C., on Tuesday, March 31, 1998, at 9:00 a.m.

PRESENT: Mr. Greenspan, Chairman
Mr. McDonough, Vice Chairman
Mr. Ferguson
Mr. Gramlich
Mr. Hoenig
Mr. Jordan
Mr. Kelley
Mr. Meyer
Ms. Minehan
Ms. Phillips
Mr. Poole
Ms. Rivlin

Messrs. Boehne, McTeer, Moskow, and Stern, Alternate Members of the Federal Open Market Committee

Messrs. Broadus, Guynn, and Parry, Presidents of the Federal Reserve Banks of Richmond, Atlanta, and San Francisco respectively

Mr. Kohn, Secretary and Economist
Mr. Bernard, Deputy Secretary
Mr. Coyne, Assistant Secretary
Mr. Gillum, Assistant Secretary
Mr. Mattingly, General Counsel
Mr. Baxter, Deputy General Counsel
Mr. Prell, Economist
Mr. Truman, Economist

Ms. Browne, Messrs. Cecchetti, Dewald, Hakkio, Lindsey, Promisel, Simpson, Sniderman, and Stockton, Associate Economists

Mr. Fisher, Manager, System Open Market Account

Mr. Ettin, Deputy Director, Division of Research and Statistics,
Board of Governors

Mr. Slifman, Associate Director, Division of Research and Statistics,
Board of Governor

Messrs. Alexander, Hooper, and Ms. Johnson, Associate Directors,
Division of International Finance, Board of Governors

Mr. Reinhart, Assistant Director, Division of Monetary Affairs,
Board of Governors

Ms. Low, Open Market Secretariat Assistant, Division of Monetary
Affairs, Board of Governors

Mr. Rasdall, First Vice President, Federal Reserve Bank of Kansas City

Messrs. Goodfriend, Hunter, Kos, Lang, Rolnick, and Rosenblum,
Senior Vice Presidents, Federal Reserve Banks of Richmond, Chicago,
New York, Philadelphia, Minneapolis, and Dallas respectively

Ms. Rosenbaum, Vice President, Federal Reserve Bank of Atlanta

Mr. Rudebusch, Research Officer, Federal Reserve Bank of San Francisco

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CHAIRMAN GREENSPAN. Welcome, everybody. I especially want to welcome back an old colleague, Bill Poole. I did not realize that the last time he sat in this room was 25 years ago.

MR. POOLE. I was sitting back there along the wall.

CHAIRMAN GREENSPAN. It has taken 25 years to move from there to here?

[Laughter]

MR. POOLE. Baby steps.

CHAIRMAN GREENSPAN. Well, that's the pleasant news. The less pleasant news is that both Joe Coyne and Larry Promisel, who have been fixtures in this room and around here for a very long time, probably are attending their last meeting.

The agenda is fairly routine today, as you well know, and I would like to start off by requesting approval of the minutes for the meeting of February 3-4, 1998.

VICE CHAIRMAN MCDONOUGH. So moved.

CHAIRMAN GREENSPAN. Without objection. You all have received a Report of Examination of the System Open Market Account. Are there any questions on that? If not, would somebody like to move acceptance?

VICE CHAIRMAN MCDONOUGH. Move acceptance.

MS. MINEHAN. I second the motion.

CHAIRMAN GREENSPAN. Without objection. Peter Fisher, please.

MR. FISHER. Thank you, Mr. Chairman. I will be referring to a package of materials that you should have in front of you. It begins with a one-page summary of my comments. 1/

1/ Copies of the materials used by Mr. Fisher are appended to the transcript. (Appendix 1)

Going over the summary, the first point is that the short-term and forward interest rate curves for the G-3 countries remain relatively flat. Second, I will be commenting that greed eclipses fear in asset markets, except in Japan. My third point will be that the flat forward pricing of short-term interest rates reflects, in my view, a "clearing price" for divergent views about the direction of the Committee's next move, not a conviction about the likelihood of steady policy. If I am right about that, then there is something of a problem. Why hasn't the risk premium associated with this uncertainty been more evident in the Treasury yield curve? I offer two tentative answers to that. One is that, in general, expanding risk appetites have consumed the uncertainty for the moment. Secondly and more technically, reductions in Treasury supply both actual and anticipated, combined with the flat forward money market curve recently have been encouraging dealers to extend duration, and that has tended to flatten the Treasury yield curve. Finally, I will discuss Desk preparations for the heavy tax inflows in April and May that will cause a sharp rise in the Treasury balance and lead once again to a need for much larger operations than normal.

Turning to the charts on page 2 that show current, 3-month forward, and 9-month forward deposit rates, you can see that these rates remain relatively flat in all three charts. Only in Germany, the blue lines, is there much of a spread between the current 3-month rate and the 9-month forward 3-month rate. In the chart for the United States, the red lines, you will note see that forward rate expectations backed up following the Chairman's Humphrey-Hawkins testimony, but they have not backed up to the levels where they closed at the end of last year.

Looking at the chart for German rates, you can see that there continues to be a wide spread between current and forward rates relative to the spreads for Japan and the United States. That spread reflects the anticipation that the European Central Bank, when it comes into existence next January, probably will have a policy rate somewhere in the mid 3 percent range; $3\frac{1}{2}$ percent is what most people in the market expect. The Bundesbank's current rate is 3.3 percent. Even with that in the background, I think the German economy and the European economies more generally are perceived to be doing a bit better than they were earlier, and it is noteworthy that both Finland and Norway raised their rates. So, if anything, the market has a sense of some upside risk to interest rates in Europe, even if the potential increase is very moderate.

Finally, in the bottom chart you can see that Japanese deposit rates, both current and forward, declined in February and March. This reflects some decline in the Japanese bank premium. Unfortunately, this is not so much the result of an improvement in the credit standing of the individual institutions but rather, in my view, a reassertion of the convoy system and

the implicit government guarantee behind the major Japanese banks. The Japanese government simply will not let those banks fail, and that has pulled some of the risk premium out of the forward rate market.

With that rather muted monetary policy outlook in the G-3 countries, the charts on the next page suggest in my view how greed has eclipsed fear in a number of the asset markets. In our written report, we detailed that phenomenon across a number of individual markets. This is a quick summary.

On the left side, we have equity indices re-indexed to July 1, 1997, and total return bond indices for the United States, Germany, and Japan. The red lines show the equity indices trading up from a 100 value on July 1 and the blue lines indicate the total return on 10-year bond indices.

On the right side, we have indexed the option implied volatility on equity and bond futures in the G-3 countries. We plotted the price of an option and its implied volatility on each of the contracts, but they are indexed to place them on comparable terms, again with 100 on July 1, 1997. You can see that the upward shifts in volatility that occurred in October and November have been reversed, especially in U.S. and German equity markets.

Generally speaking, you can see that financial asset prices in the United States and Germany have been consistently rising since the November period and their volatilities consistently falling, although it is noteworthy that in the last few days there has been some uptick in the implied volatilities in both the United States and Germany.

The bottom panel, of course, shows that Japan is quite a different story. You can see the poor performance of the Nikkei, but it did rally early this year, and total returns on Japanese government bonds have improved. The authorities were working quite hard over the last quarter to get the Nikkei to close at the 18,000 level, an effort that did not succeed. On this index scale, 89 would be equal to the 18,000 level. In Tokyo, they even invented a new term for this effort. Traditionally, the market has referred to PKO, meaning price keeping operations, where public pension funds and the like are used to support equities. In the last month or so, they have relabeled these PLO, price lifting operations. As you can see, the Japanese authorities had their only success in early January, and since then they have succeeded only in lifting the level of volatilities, illustrated on the right.

I did not chart the last few days. With the failure of the Nikkei to close at the 18,000 level at Japan's fiscal year-end, the markets are quite anxious at this point. The yen has been weakening a bit, reflecting something of a sense in the markets that the Japanese authorities are without a policy at this

point. While we hear that one more package is coming, it is not clear that the package is going to do anything for the financial sector, and the markets are quite cynical about what is likely to happen.

The next page provides another way of thinking about how risk appetites have been expanding. I return to a table that I showed to the Committee last August in which I introduced the different philosophies of four characters in their search of a return in financial markets--the optimists and pessimists under the old paradigm and the new paradigm.

The top half of this table is identical in form to the one that I presented to the Committee last August. It shows the old paradigm pessimist who is worried about an imminent breakout of inflation and the old paradigm optimist who thinks inflation may be coming but the Fed may be able to delay it for a few quarters. We have the new paradigm optimist who thinks the economy has entered a new era and he does not worry about inflation at all. We have the new paradigm pessimist who thinks that deflation is upon us. I introduced these four characters last August to help explain the volatility we were then experiencing in the markets, including intraday volatility, and these four characters were duking it out in the markets. I reintroduce them here to show briefly how they would have fared to date.

Had you run a portfolio consistent with the views of the old paradigm pessimist, shorting stocks and bonds as shown here at the bottom, you would have been crushed, to put it bluntly. The new paradigm pessimist, who would have been short stocks and long bonds, would have done a little better, but his positive return in bonds would not have come close to offsetting his negative return in stocks.

The two optimists would have done fairly well, obviously. The point is, of course, that the pessimistic views, the skeptical views, have simply been priced out of this market and are not being reflected in the performance of the market. If you were trying to manage money on the basis of those views, you were stopped out long ago.

Turning to the next page, I depict in the top panel three different trajectories of the implied yields on the fed funds futures contracts. The blue line shows these yield trajectories at the time of the August meeting, the green line in early January, and the red line as of last Friday. My view, as I mentioned, is that the steady path of the fed funds rates implied by these contracts reflects a clearing price among divergent views regarding the direction of the Committee's next move.

Forgive me if you saw it, but Friday's Wall Street Journal had a lovely item in it that summarized a recent poll of the 36 primary dealers. It showed that none expects the Fed to change interest rates at this meeting.

But the survey also revealed "that there is no clear consensus on the direction of the Fed's next policy shift." Sixteen dealers predicted a tightening, twelve an easing, seven saw the Fed on hold for at least the foreseeable future, and one said it was not possible to assess accurately what the Fed will do.

CHAIRMAN GREENSPAN. Give him an "A." [Laughter]

MS. MINEHAN. Give us an "A."

MR. FISHER. With that degree of uncertainty, why isn't there more of a risk premium evident in the yield curve? I think, as I said, that expanding risk appetites associated with the bull market in financial assets have consumed the premium and therefore partially obscured it. The charts showing the bond and equity market returns and the implied volatilities speak for themselves. Around the middle of last week, both the implied volatilities on bonds and equities and the yield curve did begin to back up. I certainly would have been a buyer of volatility at the low levels reached in the middle of last week.

In my view, this backup in volatilities and in the yield curve probably reflects two things. One is that the market is beginning to price in some uncertainty in recognition of the greater uncertainty about direction. Secondly, the market may also be pricing in the very small probability that the Committee will act at this meeting, even though it still views a move as an extremely unlikely event. When markets begin to get anxious, they sometimes price in a little of that anxiety. That adjustment may come out of the market after the meeting if the Committee does not make any change. The other kind of adjustment may be more enduring.

Turning to the next chart, a second explanation that I mentioned is that the reductions in Treasury supply, both actual and anticipated, combined with a flat forward money market curve recently have been encouraging dealers to extend duration, tending to flatten the Treasury yield curve. I hope you will bear with me while I explain this chart.

At the last meeting, I showed the Committee a chart of the yield curve on a constant maturity basis as each of the on-the-run issues traded through the funds rate. I noted that with numerous issues trading through the funds rate, many saw that as encouraging an expectation in the market that an easing move was coming. But showing you only the yield curve relative to the fed funds target rate was an incomplete picture. In pricing on-the-run Treasury issues, dealers are not significantly constrained by the level of the funds rate. Rather, their cost of carrying on-the-run issues is reflected in the term-to-date repo rates.

In the top panel, the red line indicates the 10-year on-the-run yield. The bottom blue line is the term-to-date RP rate for the on-the-run 10-year maturity as it traded over the past year. This rate is a declining maturity repo. On the first day of a refunding cycle, it is a 90-day instrument; on the last day, it is a 1-day instrument. So, it has a declining maturity as it moves across the chart.

There are a number of factors that influence this rate, obviously. One is the remaining term. A second is the scarcity of a Treasury issue. As we move through each auction cycle, the outstanding Treasury issues become more and more scarce. The on-the-run issue is purchased by people who actually want to hold it, rather than just to trade it or to hedge with it. So, as you come to each of the dotted vertical lines on the chart, you see a greater and greater scarcity value. Of course, the term structure of the money market also affects this rate.

The purpose of the top panel is to help you understand the bottom two panels by putting them in context. On the left, you can see a snapshot of the entire yield curve and the term-to-date repo rates for the on-the-run issues as of the Friday before last March's meeting. On the right, you see the same as of this past Friday. Each of these dates is roughly in the middle of the auction cycles--the first-quarter refunding and the second-quarter refunding. They are off by only a few days. What you can see is that even though the yield curve has moved down, there is still a positive carry across the entire curve. What you also can see is how much more attractive the carry is on the 10-year now relative to the short end than it was last year.

The purpose of this rather complicated picture is to make two simple points. First, to be clear, the marginal buyers and sellers of on-the-run Treasury securities are not significantly constrained by the funds rate itself but rather by the cost of financing, particular on-the-run issues in the repo market. There, the rates are significantly affected by the supply and demand conditions for those particular issues and by the term structure of the money market.

Second, at present the positive carry in the market is making it relatively more attractive for dealers to extend duration into the 10-year sector. So, while real investors or nonleveraged investors are being drawn out along the yield curve in search of higher absolute returns, the dealers are being pulled to some extent into the 10-year sector in search of the carry. These are not the only factors that affect the level of the yield curve by any means, but I think they are important ones for us to understand.

Finally, turning to domestic operations on the last page, our operations over the last period have been detailed in our written reports, and I thought I would focus on the upcoming period. Last May, Governor Rivlin chided

me and my colleagues for the \$50 billion positive surprise in the Treasury balance relative to our projections. That positive surprise reflected a positive Treasury income surprise. I thought it might be helpful to review how we are doing so far this year and to anticipate the Desk's operations in April and May.

At the top of the page, we have shown the forecasts and actual results for last year's first two quarters. At the top left you can see the forecasts by the Treasury, the Board, and the New York staffs of first- quarter Treasury budget receipts. The actual is shown in red and the percent errors of the three forecasts are indicated on the right side of that first box. In the right side panel at the top, you can see the 7 to 10 percent misses in projected Treasury revenues for the first quarter that created the positive surprises of some \$40 to \$50 billion.

The next two panels show how we are doing this year. On the left are the forecasts for the first quarter by the Treasury, the Board, and the New York staffs and the preliminary actual outcome. The Treasury's forecast was right on the money, and the Board and New York are doing a little better than last year in their forecasting. In the right panel, you see the April-June forecasts. We have a rather wide range of about \$30 billion separating New York and Washington, with the Treasury right in the middle.

The bottom picture translates this into our estimates of the daily Treasury balances at the Fed. The latter rise sharply once the Treasury reaches the ceiling on its TT&L account capacity in the banking system. The differences between the New York and the Board estimates, as I understand it, are not related to differences in nominal GDP forecasts but in some of the nuances of tax collection. We do have a bit of a gap here, but the estimates bracket last year's actual Treasury balances, the dotted green line.

I want to offer this as background to help you understand that in the coming weeks we are likely to be changing some of the normal aspects of our operations--not permanently, but to deal with this situation. First, we are likely to conduct another coupon pass in the next couple of weeks for \$5 to \$7 billion to lay a bit more of a reserve base.

Secondly, when the need for reserves starts to rise sharply, we are likely to want to enter the market quite early in the morning, 8:00 or 8:30 a.m., so that we can insure that we get sufficient propositions from the dealers to cover our needs. On those occasions, we are likely both to announce the day before that we will be coming into the market at, say, 8:30 a.m. the following morning, and we would plan to conduct two operations that day. We would do one in quantity, on the order of \$10 or \$20 billion, and come

back later in the day to fine-tune the total. I certainly hope that the fine-tuning operation is going to be in the same direction as the morning's operation. There is some risk it might not be, that we would be adding reserves in the morning and draining reserves later in the day. If we did that, I would certainly hope that we would be doing them in different maturities. We might have met our basic reserve objective for a week or so in a big operation in the morning and then have to fine-tune it later in the day with an overnight drain. I hope that does not happen, but that is a possibility we have to bear in mind if the reserve needs expand to levels close to either the New York or the Board estimate. Both estimates indicate the need for quite sharp reserve growth, and how quickly we will have to expand the scope of our operations will depend on how soon that need arises.

Mr. Chairman, there were no foreign operations to report for this period. I have provided the Committee with annual reports on both our domestic open market operations and our operations in foreign currencies. I will need the Committee's ratification of the Desk's domestic operations during the intermeeting period; they are detailed in our written reports. I would be happy to answer any questions.

CHAIRMAN GREENSPAN. The difference between the New York Bank and the Board with respect to Treasury receipts is huge in the sense that it does not appear from the pattern on the chart that this is merely a displacement of revenues from one period to another. New York's 1998 fiscal year surplus is significantly higher than the Board's. What number do you have?

MR. FISHER. I'm afraid I don't have that number at my fingertips. It's on the order of a \$30 billion surplus for this quarter.

MR. KOHN. I think the higher receipts in the New York forecast carry through the end of the fiscal year. In fact, I think New York has an even larger difference in its forecast of the fiscal year surplus because there are some factors other than receipts affecting their surplus estimates. But you are correct, Mr. Chairman. The difference is not simply the result of a displacement from quarter to quarter; New York has a much larger surplus.

CHAIRMAN GREENSPAN. Is the Treasury surplus for the fiscal year over \$50 billion at this point in your forecast?

MR. FISHER. Yes.

CHAIRMAN GREENSPAN. Can we go back briefly to Japan? I think we are all puzzled by the presumption of the Japanese authorities that they can somehow have an effective program to change the stock market and announce it. It is questionable enough to believe that the government can substantially alter the level of the stock market. It is worse to believe that it can announce its intention to do so and presume that the readings that are going to occur as a consequence are going to be taken seriously by anybody. Most questionable of all was the announcement yesterday by the postal and life insurance system that they had completed their transfers to purchase stocks for the period through March 31. You said they do not have a policy. Having any plausible policy is better than none. If this is the way they conduct their financing operations, why is there not far more significant negative reaction within Japan to this type of operation, which seems so inefficacious?

MR. FISHER. I wish I knew the answer to that question. I certainly share your assessment. When I said "no policy," I want to be clear that I was referring to the market looking, seeing, and feeling that nobody was home. There is the LDP; there is the cabinet; there are the members of the Diet; there are the agencies; these are the different decision-making poles. I think the perception in the market is that they do not seem to be talking to each other, which is what I am implying by no policy. There is no center of gravity being provided, and that is what I was focusing on. On the question of whether this matters, how otherwise sensible people--

CHAIRMAN GREENSPAN. One of the purposes of their stock market operations was to create Basel-weighted capital adequacy ratios for the March 31 statement date. If I am a counterparty funding some of these Japanese banks, I am not going to look at those numbers. What possible use are they to me in judging the safety and soundness of Japanese institutions if they are produced as if somebody had lit a match under the thermometer?

MR. FISHER. I think the counterparties of the major Japanese banks are looking, unfortunately, at the implicit Japanese government guarantee that appears to have been reaffirmed. I don't think they are trading on the basis of the capital adequacy numbers when they are trading with Japanese institutions.

CHAIRMAN GREENSPAN. What has been the latest premium in the London market on yen deposits for Japanese banks?

MR. FISHER. It has come down to under 20 basis points.

CHAIRMAN GREENSPAN. But it is still positive?

MR. FISHER. Oh, it is still positive; we can still see it.

VICE CHAIRMAN MCDONOUGH. If I could make a comment: The people in the market think that the single least wise thing the Japanese could have done was to reconstitute the convoy system. But that is exactly what they have done. As a result, the view is that the 19 largest banks have become a sovereign credit, and therefore the premium was created and there is still a premium.

CHAIRMAN GREENSPAN. The premium has to be a reflection of doubts about the sovereign credit.

VICE CHAIRMAN MCDONOUGH. Precisely, and even though there is a perception that the bank that failed, Hokkaido Takushoku, was managed reasonably well when it collapsed,

the Japanese are convinced that they did a terrible job because they did not anticipate the collapse. I think the market is saying that, yes, there is a convoy and there is sovereign credit, but if there is an accident, the winding down of the institution will be managed very badly. Therefore, there is concern that that could have a contagion effect. With reference to the Basel ratios, I think there is a general feeling that the stated ratios are meaningless in assessing the condition of Japanese banks. The rest of us play a game where the ratios mean something, but for the Japanese banks they really do not. We have a sovereign credit with a question associated with it, as you suggested.

CHAIRMAN GREENSPAN. They have always had the opinion that since they would never let a bank fail, the Basel ratios were irrelevant.

VICE CHAIRMAN MCDONOUGH. Exactly.

CHAIRMAN GREENSPAN. The fact that they agreed to the Basel ratios has always implied a very unusual admixture. On the one hand, every Japanese commercial bank is backed by Japan's sovereign credit, and on the other hand, they have met their Basel ratios. This creates confusion. It has to be terribly confusing to a lot of our colleagues in Japan who are wondering where all this is going. Other questions for Peter?

MR. JORDAN. Peter, you made what was almost a passing reference to the fact that intermediate-term Treasuries had traded through the funds rate this year, and you indicated that many saw that development as reflecting expectations of some easing in the funds rate. But the alternative explanation is that trading through the funds rate is consistent with an expectation that the funds rate will be increased. We had at least a brief discussion of that on the call over the last week or so. With regard to our credibility as a central bank, one of your people commented that if in a gold standard type world there was growing credibility that the central bank was going to

take the appropriate policy actions to maintain price stability, one would expect intermediate-term issues to trade through the overnight interbank rate. Do you want to elaborate?

MR. FISHER. I don't think I need to. I think you've said it very well.

MR. JORDAN. I'm asking about Street talk or views on this issue.

MR. FISHER. I don't think the Street's focus on that hypothesis would be at the short end of the coupon curve, but if there were an anticipation of an easing move, the Street would talk about expecting a rally further out on the yield curve. In January, in fact, we observed what I was talking about in the chart that I showed at the last meeting. As I said then, I think the market was responding to recent speeches by the Chairman and Governor Meyer, which were interpreted as indicating an increased likelihood of an easing action. That is when the short end of the coupon curve traded through the funds rate. I do not dispute that what you have described can happen and the Street does talk about it that way, but what was happening in January was the other scenario.

MR. KOHN. But wouldn't it also reflect, President Jordan, the expectation that, unless there was a negative term premium, nominal short-term rates would fall at some point so that the expected holding period yield from rolling over overnight instruments and two-year instruments would be equal.

MR. JORDAN. I was thinking more in terms of the 5- to 10-year range. If people anticipated a transitory acceleration of inflation that we would respond to, we would expect the yield curve to be downward sloping in that longer-term range.

MR. KOHN. Right, because inflation would come down and short-term rates would move up.

CHAIRMAN GREENSPAN. Further questions for Peter? If not, would somebody like to move to ratify the actions of the Desk?

VICE CHAIRMAN MCDONOUGH. So moved.

CHAIRMAN GREENSPAN. Without objection. Let us move on to Mike Prell and Larry Promisel.

MR. PRELL. Thank you, Mr. Chairman. I think it would be appropriate for me to begin this morning by acknowledging that, yes, you did tell us so last month. You said that our GDP forecast for this year probably was too low, and now we have raised it appreciably. Moreover, a little reading between the lines of the Greenbook would indicate that, even with the revisions we have made, we are somewhat more concerned about the possible upside risks to our forecasts for demand and inflation than about the downside risks.

With that as preamble, let me engage in a little mind-reading and attempt to anticipate a few of the questions you might have about our revised forecast.

First, isn't the upward-revised GDP growth rate of 3.1 percent that we're showing for the first quarter still rather skimpy, especially in light of the strength of the labor market indicators?

That's certainly a reasonable question. Judging by the growth of employment and hours through February and the continuing low level of jobless claims, the increase in labor input almost surely was well above the average of recent quarters. Moreover, the data on consumption, housing, and equipment purchases point to a large gain in private domestic final sales. However, it is also true that the January figures for net exports and inventory investment were much weaker than their respective fourth-quarter averages. Even when we plug in what seem like ample numbers for these two variables in February and March, we still end up with a drop-off in GDP growth.

But, you might ask, doesn't that just imply an implausible drop in labor productivity? Yes, it does imply a drop, but obviously not one we find implausible. Output per hour has risen considerably in the past two years relative to the underlying trend embedded in our projection--the kind of pickup that one might expect to accompany an acceleration of production. If we have it right, a movement back toward the trend line was to be expected over time--and, given the erratic character of the series, a substantial drop in some quarter would be far from shocking. That said, in

the present case, we also would not be stunned if the spending data coming in over the next few weeks were to point to a larger gain in Q1 GDP.

Well, you are thinking, the first quarter is history, anyway; so the real question is what makes us think that the still greater moderation of GDP growth that we long have been forecasting is here at last? Isn't domestic demand proving to be strong enough to override any damping effect that might be coming from the external sector?

It certainly is conceivable to me that what we are going through now will turn out to be the obverse of the 1987-88 experience. In that case, a strong upswing in net exports helped to keep the economic expansion on track in the face of the stock market decline. This time around, a booming stock market might offset the effects of a slump in net exports.

However, a few considerations lead us to conclude that this scenario is not the most likely. I will leave it for Larry to discuss the incoming evidence on the trade front. Suffice it to say at this point that the recent news has not undermined our notion that there is--and will be for a while--an appreciable drag on activity coming from the external sector. It is not just an Asia story; it is also the lagged effects of a sizable cumulative appreciation of the dollar over the past few years.

But, that said, could we be seriously underestimating the ongoing thrust of domestic demand? As we look at it sector by sector, we do not think we have stinted on expenditures. Among other things, demand has been boosted recently by the decline in longer-term interest rates over the past year, and we do not foresee that interest rate trend being extended in any meaningful way. As many have commented, this has in part been the dividend of the Asian crisis for the U.S. economy. To be sure, the predicted softening in economic indicators could revitalize hopes of Fed easing. But, unless the bond market bulls are able to push yields materially below the recent range, this should not provide a great amount of additional stimulus.

Where we might be especially vulnerable, though, is with respect to the stock market. At this point, it appears that the market has entered a phase in which the gravitational pull of valuation may no longer be operating. The PE ratio for the S&P 500 recently reached 27, based on trailing 12-month earnings, even as companies were issuing warnings and analysts were lowering their 1998 profit forecasts. In the prevailing psychological environment, with people increasingly convinced that the market will inevitably yield returns vastly greater than those available today on liquid fixed-income instruments, the market can keep going appreciably higher on its own momentum--at least until there is an event jarring enough to cause people to reassess their general view of the world.

For now, the market is an integral part of a perpetual motion machine that keeps the economy powering ahead. We have seen this before, recently in Asia, and while I do not want to overstate that comparison, the issues about bubbles that the Chairman raised in his famous "irrational exuberance" speech do seem increasingly relevant. We pointed out once again in the Greenbook the difference it might make to the outlook if the market were merely to rise moderately from here--rather than falling somewhat, as we have predicted. If the market were instead to keep zooming upward at 20 or 30 percent per year, then the consequences for aggregate demand and thus for inflationary pressures could be quite striking.

This brings me to a final question. There seems to have been some increase in concern about inflation risks of late, with commentators noting such things as the continued tightness of the labor markets, the recent upturn in oil prices, or the heating up of real estate markets. Is there something going on here beyond what we have captured in the Greenbook? Perhaps, but we think that the upward revision we have made to our inflation forecast leaves the risks reasonably balanced--assuming that the predicted output and unemployment path is about right.

As we noted in the Greenbook, increases in average hourly earnings--the only broad statistic yet available for this year--have not been getting discernibly larger or smaller of late. However, the anecdotal reports seem to be indicating with increasing frequency an acceleration of compensation rates and an increase in recruiting and training costs. The picture is still uneven, with many firms saying they are holding the line on pay and others that they are tightly targeting increases to those workers in key positions or with "hot" skills. And, where pay is raised, it often is through flexible forms of compensation that can be trimmed more easily when business slackens--a feature that we think may be significant in determining the momentum of wage inflation going forward. In the end, we bowed only slightly to the anecdotal news and raised our compensation forecast just a touch more than we would have on the basis of the lower unemployment rates in this projection.

At this point, we are sticking with the notion that the decline in inflation and inflation expectations over the past year will exert a significant damping influence on nominal wage increases. Thus far in 1998, the trend in overall CPI inflation has remained very favorable, owing to the sharp decline in oil prices. Moreover, even with the recent firming in oil prices, the outlook for this sector through 1999 now looks more favorable than it did in late January, and we have lowered our forecast for retail energy prices.

On the other hand, though it may be splitting hairs to say that the core CPI has increased more rapidly on average in the past couple of months,

there certainly has not been any further downside surprise there. The deflationary impact of the Asian crisis appears to be no greater than we anticipated, and with a slightly lower dollar exchange rate path this time, the projected decline in non-oil import prices outside the semiconductor and computer sector is a little shallower. Overall, our interpretation of the incoming price news--coupled with the more inflationary labor market conditions in this projection--has been mirrored in the quarter-point elevation of our core CPI forecast.

In concluding, I might remind you that we have not built into the baseline projection any allowance for the big hike in cigarette prices that looms as a distinct possibility. The legislative proposals keep changing, as they did just yesterday, and the only thing that seems certain right now is that there are lots of people willing to provide the manufacturers with an excuse to raise their prices sharply. It is easy to come up with numbers that would add several tenths to the CPI inflation rate at some point. This would present the Committee with a challenge it has not faced in some time--that is, deciding whether to accommodate an adverse, rather than a favorable, supply shock.

Larry will now comment on factors bearing on the external outlook.

MR. PROMISEL. I would like to highlight four areas of uncertainty on the international side: the crises in Asia, Japan, oil, and the dollar.

First, the crises in Asia: There is an Asia effect, although we do not have a systematic handle on it. We see evidence in the trade statistics of the Asian economies themselves. The combined trade balance of Korea and Thailand in November-December swung from a deficit of \$5 billion in 1996 to a surplus of \$4 billion in 1997--a swing of more than \$50 billion at an annual rate. We see evidence of it from the U.S. side: Trade statistics for January show a substantial decline in exports to Korea and Thailand. The U.S. purchasing managers' survey reports weak export orders. The anecdotal reports from the special survey conducted by the Reserve Banks contribute substantially to our sense of the weakness in exports to Asia. And we see evidence in the trade statistics of Japan and Europe. Based on all of this somewhat fragmentary information, most of the effect to date seems to be on the side of Asian imports, not Asian exports.

The question now is not whether there is a noticeable effect, but rather how large and how long-lasting that effect will be. On that score, about all I would assert is that the probability of some of the more negative scenarios that we and others have talked about has diminished. While the problems in Asia certainly have not been solved, the situation outside of Indonesia--and perhaps Malaysia--seems to have stabilized, and we can be a bit more confident that at least some of the needed reforms and policy measures will

be implemented. The evident resolve of the new government in Korea and the success of the rescheduling effort for claims on Korean banks have added importantly to our degree of confidence.

Second, Japan: Recent data--including fourth-quarter GDP and indicators for the first quarter--suggest that the Japanese economy is even weaker than we had been expecting. Progress on resolving the problems of the Japanese banking system is slow, at best. On the other hand, substantial fiscal stimulus has been signaled, although the details are missing, and there is some prospect for stimulus in the form of tax cuts. What remains to be seen, of course, is how much so-called "real water" there will be behind the headline figures. I would say there is now some upside risk, not just downside risk, to the outlook for Japan that is presented in the Greenbook.

Third, oil: The decline in oil prices through mid-March was a surprise. If that had been sustained, it would have been a central element in the revision to our Greenbook forecast since January. Of course, the decline has not been sustained. Oil producing countries have responded with an agreement to cut production, and their decision is sufficiently credible that prices have backed up quite a bit. We anticipate that prices will stay near current levels, with expanded exports from Iraq working to keep prices from rising further later this year and next. The price of oil in our forecast for 1999 is now \$2 per barrel lower than in the January Greenbook. We think the risks to oil prices are fairly evenly balanced around the forecast path. I might note that the price of oil in our forecast also is about \$4.50 per barrel lower on average in 1998 than it was in 1997. The decline in price from last year plays a significant role in the allocation of the burden of current account adjustments in the world and tends to some extent to support global aggregate demand.

Fourth, the dollar: We have a small decline in the dollar's value built into our forecast, in both nominal and real terms against the yen and European currencies and in real terms against the currencies of emerging market economies. Again, there are risks on both sides. Especially in the short run, we see some upside risks. The market may continue to be disappointed in the performance of the Japanese economy, putting further downward pressure on the yen. Problems in Indonesia could spread and Asian currencies could weaken again. Persistent vigor of the U.S. economy could entice investors. And while the process leading toward the next stage of EMU seems to be on track, there is scope for problems--associated, for example, with the German election in September. However, over the longer term, what we see as the need for the dollar to decline to begin to correct U.S. current account imbalances could assert itself, as some of the factors that have been putting upward pressure on the dollar diminish in force: the uncertainties related to EMU, the Asian crises, and even the weakness in Japan.

Putting all four elements together, I myself see the balance of risks skewed toward the upside, in terms of the foreign impact on U.S. demand and prices. My colleagues probably would not be so unequivocal, but then again, this is not their last FOMC meeting! [Laughter]

CHAIRMAN GREENSPAN. Larry, I noticed that in the last couple of days we have had a particularly strong trade-weighted dollar. How much is the dollar above expectations in the final Greenbook forecast, which I assume was put together a week to ten days ago?

MR. PROMISEL. How much higher depends on what you mean by the dollar. There are a lot of different ways of weighting and characterizing the dollar's average value. It has gone up some against the yen, but I don't think there has been a big change in terms of the various weighted averages that we use. I am looking for one average that we employ--it was 101.3--

CHAIRMAN GREENSPAN. That is the G-10 weighted average?

MR. PROMISEL. Yes.

MR. TRUMAN. On that average, the dollar is about one percent higher than it was at the time the Greenbook went to press.

MR. PROMISEL. That's against the other G-10 currencies, but it is up less than that presumably against some of the other weighted averages. It does not change the basic picture.

CHAIRMAN GREENSPAN. The recent appreciation is still noise as far as the Greenbook forecast is concerned?

MR. PROMISEL. Absolutely, in our view.

CHAIRMAN GREENSPAN. Supposing the fiscal year surplus number comes in closer to the New York Bank's estimate than ours. That would seem to be outside the noise range in terms of the implications for fiscal drag. What kind of response would you have if we accepted their numbers for receipts? What happens?

MR. PRELL. I think we need to consider what the source of that difference might be before we would characterize that as fiscal drag. We have not gotten totally inside their brains to be able to say exactly why their numbers differ from ours, but it appears that one element in the picture is, in effect, New York's expectation of much larger revenues from capital gains. We normally would not think of that as a particularly restrictive fiscal element. People get wealthier; they presumably anticipate that they will be paying more taxes; and they are not bound by any liquidity constraint, given their wealth. So, if that is the source of the difference, we would not regard that as implying much additional fiscal restraint. Also, I wouldn't say at this point that the difference is outside the range of normal noise. We have had some substantial surprises in the last few years. As the economy gets bigger and bigger, the possible dollar errors grow. Even so, it is a significant difference, and we shall know a lot more in the next few weeks. Some of this is speculation about whether people anticipated their tax liabilities for last year better than they did for the previous few years. There also is uncertainty about the sources of the income. We are not adamant in saying that the New York forecast is wrong, and I am sure that they are humble about the precision of their forecasting ability, too, at this juncture.

MR. FISHER. Absolutely! I put in last year's actuals to show that the range of misses was 7 to 10 percent. That had a huge impact in dollar terms. But I was also offering that experience to provide some scale of the forecasting errors involving big numbers. If we could get Desk operations to have misses of only 10 percent over a 24-hour horizon, we would be doing awesomely well.

MR. PRELL. It is my understanding that the difference in the projections of the surplus for the fiscal year, which I believe is on the order of \$40 billion, is mostly on the revenue

side, but not all of it is there. There are the ongoing questions concerning how appropriations will play out in terms of authorizations and expenditures.

CHAIRMAN GREENSPAN. Do you have any rule of thumb regarding the effect of changes in crude oil prices on the core CPI--some notion of the feed-through?

MR. PRELL. I cannot cite a rule of thumb off the top of my head, but in some of our models we do have terms for food and energy prices feeding through to the core CPI. We did a simulation that indicated that the effect of the downward movement in energy prices in our forecast on the core inflation rate this year is somewhere between .1 and .2 percent.

CHAIRMAN GREENSPAN. It is quite substantial in other words.

MR. PRELL. It is not negligible, to be sure.

MR. JORDAN. Mr. Chairman, we have done a little work along the same lines. Our staff has what we call the median CPI or the trimmed mean. The effects are on the order of magnitude that you suggest, Mike, from what I recall our people were saying. They are continuing work to evaluate those indirect effects.

MR. PARRY. Mike, I have two questions that are somewhat related. The Greenbook stresses that labor markets are very tight and that the tightness could lead to increases in real compensation. But increases in real wages in the Greenbook forecast actually decline in 1999. For example, the ECI decelerates by .5 percentage point relative to the CPI. In fact, real wage inflation may even be going down more than that if one believes that wage earners bargain in terms of what they see on Main Street rather than what they read in the newspaper about the CPI, which, of course, is affected by the technical adjustments. Could you comment on why real wages are decelerating in the forecast where you have the economy operating at such a high level and with such little slack?

MR. PRELL. We do not have real wages declining, but in 1999 the gap between the ECI increase and the CPI increase is smaller. We are not at all sure that that is the number to focus on. In fact, we prefer to focus on a product price measure rather than the consumer price index in looking at real wages, and it feeds through, too, to the implications for income shares. We have had very substantial acceleration of real compensation gains over the past two years. We are anticipating sizable further increases in 1998 and 1999. In 1999, it is a smaller increase and one could explain that in part by the fact that we project a little upcreep in the unemployment rate. We also are banking to some degree on the notion that the ECI and other wage measures have been boosted over the past year or so by minimum wage hikes. These are not present in this projection. One could regard that, I suppose, as another upside risk on the inflation outlook because there obviously is discussion, albeit fitful, of further minimum wage increases. We also saw a very big increase in commissions and bonuses in the latter part of 1997, which we think probably will be repeated in the first quarter of 1998. These are associated in part with the huge level of profits and activity in the financial and real estate sectors. We foresee an abatement of that contribution to compensation increases as we move forward.

As I said earlier, we are fairly convinced by all the anecdotal and survey evidence--indicating that employers have been utilizing more flexible forms of compensation such as cash bonuses and incentive pay of various sorts--that future adjustments to compensation should be more sensitive than previously to a deceleration in the economic expansion and a falloff in profitability such as we have in our forecast. In other words, the inertia in adjustments to compensation that formerly might have been present in such circumstances may not quite as evident in this cycle. Those are the elements that lead us to be fairly sanguine about the prospects for holding the line on nominal compensation increases even in this tight labor market.

We still anticipate sizable increases in real wages that we think are in general conformity with the Phillips curve model.

MR. PARRY. Related to a point that you made in your comments about the anecdotal data pertaining to inflation and how they might be at variance with some of the published statistics, might that be related to the fact that the anecdotal data reflect what people see? The CPI certainly includes the effect of technical adjustments. Might this discrepancy actually increase over time because, as you show in the Greenbook, the technical adjustment to the core CPI is probably going to be on the order of .6 percent in 1999? Of course, people do not see that; they only read about it.

MR. PRELL. I am not sure about the ability of John Q. Public to filter out all the cumulative changes from the 1994 approach to measuring consumer prices to the method used in 1999.

MR. PARRY. They never see it except when they read about it.

MR. PRELL. In the world of instantaneous flows of information, all the economists will be talking about it and maybe it will filter out into the real world to some degree. I guess we are not totally persuaded one way or the other on this. We are inclined to think that in terms of formal cost of living adjustments and, more informally, to the extent that people look at what the CPI has done over the past year, they are probably going to be influenced to a considerable degree by the headline number. I did note some tension between the anecdotal and the statistical news on the wage side. This does make us nervous. In our survey that all the Reserve Banks participated in, the focus was more on what business firms are doing, if anything, if they are experiencing a shortage. I think a majority of the firms that were in that predicament said they were doing something. But I think it is difficult to judge the timing and dimension of an

acceleration--how much more they are doing now than they were doing before. And in general, based on this anecdotal evidence, I wonder if there isn't some sort of Heisenberg problem here. We are looking so hard and we are asking so many people that one wonders whether we are finding a few more stories than we would have if we did not have a neutral expectation about what was going on. We are a bit nervous about this, but I think there is a little upside risk in the wage outlook.

On the price side, I believe the markets and the commentators have gotten a whiff of the inflation that may be out there. Recent housing market developments have intensified that impression. The indexes have been distorted by shifts in geographic mix, but I think the large increase in prices that was reported in connection with this new home sales figure the other day is one more instance where people are not looking at those subtleties. What they sense is that this is a really hot market and prices may be moving.

MR. PARRY. Thank you.

CHAIRMAN GREENSPAN. President Moskow.

MR. MOSKOW. Mike, you mentioned that oil prices are one of the temporary factors that are affecting inflation; in fact oil prices are even affecting core CPI. The other key factor, of course, is the dollar. I'm wondering if you've done any simulations or have any quantitative estimates as to what the impact of the stronger dollar has been on the core CPI last year and this year.

MR. STOCKTON. President Moskow, our model estimates suggest an effect of about $\frac{1}{4}$ percentage point per year over the last couple of years on core CPI from the lower nonoil import prices, simulating forward from 1995.

MR. MOSKOW. Does that include 1998?

MR. STOCKTON. Yes, there may be another quarter percentage point or so for 1998.

MR. PRELL. This is an area in which economic science has not given us anything that we want to stake our lives on. We have various results with the various models, but I think we are persuaded that the appreciation of the dollar has had a significant effect. Looking at what is going on in the goods markets, I think the evidence is quite persuasive that we are getting a significant effect. As we go forward, the waning of that effect, given our dollar assumption, does add a little to the acceleration of prices that we have in the forecast.

MR. MOSKOW. Thank you.

MR. PROMISEL. We do have a bit of a lag built in between the exchange rate change and the effect on import prices. So, even if the dollar starts coming off its current level, we will see some effects in terms of lower nonoil import prices for a little while.

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. Mike, you correctly anticipated a question that I had, but in at least one respect your presentation added to a puzzle that I had when I read the Greenbook and some of the other materials. You have personal income growth picking up to a 6.7 percent rate in the first quarter from a relatively robust pace last year and in fact from an upward trend over the last five years. Employment growth has been very strong along with hours worked. There is strong demand for output, strong demand for workers, and spending has been very robust. The stock market is booming. The real estate sector also is booming, including existing and new home sales, housing starts, and housing permits, and business fixed investment remains on a sharp uptrend. Then I read the first sentence of the draft directive that says "the information reviewed at this meeting suggests that the expansion in economic activity may have slowed somewhat."

MR. PRELL. All of that reflects the arithmetic that I described at the outset as to how we have added up the GDP components. There is the tension between the labor input indicators and what we can add up on the expenditures side. We've seen this before. We will see it again. It leaves a lot of room for surprise, but we have reconciled this discrepancy by pumping up the missing expenditure numbers as much as we felt was reasonable, particularly on the inventory side. We are left with the implication that there was a substantial decline in productivity in the first quarter. As I said, that is not inconceivable to us in terms of our general outlook on the cyclical, so to speak, element of productivity performance over the forecast period. However, the quarterly change in productivity is sharp and that raises a question. We might yet find that GDP growth did not slow in the first quarter.

MR. JORDAN. Let us suppose it is true that real GDP growth in the first quarter, as you have added it up, is a smaller number than that for the fourth quarter. In the face of all these other indications of strength, do we really want to characterize the economy in the first quarter as a weakening in economic activity even though the real GDP growth number may be arithmetically smaller for the reasons that you indicated?

MR. PRELL. This is a policy issue on which I have no expertise. You are asking whether I am comfortable with that? I guess what you are saying is that the characterization of economic activity need not be a reference to GDP growth per se, because the latter may not capture the sense one has of the vitality of the economy in the first quarter of the year. Perhaps there is some other way that you folks might want to express your view of what you heard at this meeting.

MR. JORDAN. Let me take you to the productivity issue then. Nothing that any of us hears anecdotally when we talk to people or other evidence that we can look at would support

your first-quarter productivity estimate. I understand how it is derived and why you wind up with this negative productivity number, shocking as it is. It is a residual.

CHAIRMAN GREENSPAN. Can we stipulate that measured productivity is distinct from true productivity?

MR. JORDAN. Somehow statistically arrived at! When I was talking to Don Kohn last week, he told me that the decline did not happen and that productivity probably rose by, say, 2 percent. Starting with that presumption, what else has to change in your forecast if you are forced to put in a positive productivity number for the first quarter? Also, what is the net going to look like?

MR. PRELL. If we talk about it simply from a straight arithmetic point of view, obviously we would have to find some more expenditures. Where might we find them? It could be in any number of places. One could conceive that, despite what looks like a very strong consumer expenditure number in the first quarter, people really have had a lot of income, though it is overstated in the first-quarter number because of seasonal adjustment quirks. Nonetheless, consumer spending is strong and is supported by a lot of wealth and people feeling really great. So, there could be an even boomier picture in consumer expenditures than we have projected.

MR. JORDAN. So you would be raising not just the real output number but the nominal GDP?

MR. PRELL. In the end, BEA is only going to publish a number that adds up on the expenditure side, and the productivity numbers are measured that way. So, that is how we are going to have to get there. We have only one month of data for net exports and that is a volatile number, so we could be surprised there. Over the past year we have been surprised on final sales, and there has been an accompanying upside surprise on inventory investment. We could

see larger amounts of inventory investment that would be consistent with higher final sales and with our basic sense that no troublesome accumulation has been occurring. Getting up to 4 or 5 percent GDP growth is not totally implausible. We could also have some revisions in the employment figures or something precipitously on the weak side in March that would make up for the string of upside surprises that have helped to generate this weak productivity number.

MR. JORDAN. When you try to reconcile the data and make them consistent on the income side, is your negative productivity number tied in with the decline in corporate profits that you're showing?

MR. PRELL. Again, arithmetically it is. Certainly, what we have in this forecast for 1998 in essence is a story where unit labor costs are increasing more rapidly because of the lagging adjustment of labor input to the deceleration in output. Weaker productivity means weaker profits.

MR. JORDAN. You can imagine what it's like when we are out around our Districts talking to people and we tell them that productivity is going down, profits are really bad, but employers are hiring workers in large numbers because they are earning income and spending a lot of money. Something just goes "clunk" in that logic; it simply does not sound quite right.

MR. PRELL. I think they have been hiring people in part because business has been very good and they expect business to continue to be good. On the basis of the anecdotal reports, firms have had such a difficult time finding workers that they're probably still catching up to some degree. That may be one of the reasons the workweek has been on the firmer side than we would have expected, even allowing for statistical problems. I think that continues to happen. There is momentum to this process. If we get that stronger first quarter, it is going to imply accelerator effects and possibly a stronger investment outlook beyond. If we get that

performance and stronger profits, it calls into question our expectation of a weaker stock market. So, one could envision, as happened last year, that things could come together in a way that propels the economy forward and keeps going on with the support of the financial markets. On the other hand, that would imply that we might be moving toward a 4 percent rate of unemployment this year, and I think that strains one's sense, given what one can already see, of what is possible without really substantial inflation pressures.

MR. STOCKTON. As a statistical matter, President Jordan, there are a couple of quirks in this minus 2.2 percent productivity number that we have for the first quarter. One relates to the fact that we think the 10- and 11-day pay period seasonal adjustment problem has led to an artificially large increase in hours worked in the first quarter. The second is that, as you may recall, we thought we were seeing significant declines in self-employed hours late last year that were boosting productivity to well in excess of the 2 percent underlying number that you were just talking about. Some of that appears to be going away now.

CHAIRMAN GREENSPAN. Any further questions for the gentlemen?

MR. BROADDUS. Mike, I have the impression that the possibility of a stock market decline is playing a larger and larger role in the projected deceleration of the expansion. I would be interested in some sort of quantitative relationship here. Are you expecting a permanent drop in the market? Is it something that is going to be extended and sustained? If we had a normal correction, something like a 10 percent correction or like the correction that we had in the fourth quarter, that really might not have much of an impact on aggregate demand. So, I'm wondering what underlies the quantitative dimensions of this aspect of your forecast.

MR. PRELL. It could be less. I apologize if word about what we are assuming did not get to you. We have a 10 percent decline in the market from its level last week to the end of

the year and we then have a flat market in 1999. So, in comparison to what we've seen in the past few years, which as I recall were a couple of close-to-10-percent corrections that were quickly reversed, this more permanent correction would be a distinct contrast. We provided a simulation in the Greenbook of an alternative GDP path in which in essence the stock market rises roughly 5 percent a year, enough to keep pace with the growth of nominal disposal income. It makes some material difference when we move out to 1999. As I suggested in my remarks, if you think the market can do appreciably better than that--and that is really a paltry performance by the standards of recent years or in relation to what the average investor seems to be expecting--then the economy's performance will be dramatically different as we move out into 1999.

CHAIRMAN GREENSPAN. Further questions? If not, would someone like to start the roundtable? President Jordan.

MR. JORDAN. Thank you. When I left the meeting in early February, we were waiting for the East Asian effects to get here, and as I tried to analyze their likely impact I felt like someone who was trying to anticipate what would be the effects of an asteroid or a comet that supposedly was going to show up one of these days. A couple of weeks after our meeting, there was in fact a report about an asteroid that might reach the earth in about 30 years.

[Laughter] Upon further analysis that report was very quickly dismissed. Almost 25 years ago, we were all treated to reports of the coming of the comet Kohoutek. Comet Kohoutek was going to do wondrous things. It was going to be the brightest celestial object of the century, and there was speculation that it might change the earth's rotation and weather patterns. Of course, it was a complete fizzle and no one will remember it. As I thought about such phenomena, it occurred to me that asteroids and comets are less predictable than eclipses. But even eclipses, though

predictable, are often very hard to observe because there is so much other activity in the atmosphere that even a trained scientist may need powerful instruments to observe one.

I then thought about El Niño, which has been wonderful for my part of the country this winter. The lesson there is that even when phenomena are accurately forecasted and exceed anticipations, the effects are sometimes hard to analyze. If one analyzed El Niño's effect on the basis of expensive California homes falling into the ocean, one would have a different picture than if one lived around Lake Erie and saw what a wonderful winter we had in our part of the country. The schools did not close. The people who drive salt trucks complained about the lack of overtime, but other than that the experience was relatively positive. If we put such disparate observations into a full general equilibrium context, it really is very hard to sort them out. It may be that companies that compete with Asian imports or that lose export sales in Asian markets will continue to get hurt. Even so, I still think that the economy is much more likely, as Mike Prell remarked, to be stronger on the upside than weaker on the downside of the Greenbook forecast.

I also continue to be concerned that we may never see the effects of monetary excesses in output prices, but rather that we will see them in asset prices. At our business advisory council meeting about two weeks ago, one of my relatively new members came into the meeting and indicated that he now understood the role of the Federal Reserve. It was to keep people like himself from doing foolish things. I asked him to explain. He runs a manufacturing company. He said he was driving one day and saw a big sign indicating that the land he was passing was zoned for commercial real estate development and was for sale. He stopped and considered whether he ought to purchase that land in order to diversify his business activities. On further reflection he realized that he didn't know anything about commercial real

estate development and that this really was a dumb idea. So, he came to our meeting to persuade me to help keep him from doing something that would be really foolish. We are hearing more such stories, and I would be interested in knowing whether some of you have heard them as well.

We asked our advisory council members and our directors how the first quarter felt compared to the first quarter of last year and compared to all of 1997. In general, the run-through simply reflected what the Greenbook is reporting probably happened. Results were not only strong but stronger than anticipated; indeed, they far exceeded expectations. People said they came into this year with a cautious view of the economic outlook, but they now are revising up their expectations about what is going to happen.

The anecdotal reports on labor markets still lead me to believe that the reported compensation numbers are not capturing what is going on. First, I don't think the turnover of workers is being analyzed correctly. In addition, there is occurring what I now think of as the "dumbing down" of the labor force. More and more employers are telling us that because of the introduction of smarter technology and the way they are organizing their operations, they now are willing to hire at a given wage people who have lesser skills than previously. That does not get captured in any of the compensation numbers that we receive.

To cite other signs of labor market tightness, in the several counties around Dayton, Ohio, in what is called the Miami Valley, there are currently 550,000 employees. The university there did a survey of job openings that added up to over 50,000. That total is 10 percent of current employment in the area. I asked our business contacts there how they were going to deal with this labor scarcity problem. They indicated that they are counting on migration from other parts of the country. They also reported for the first time such developments as workers balking at voluntary overtime. Retail companies are telling us that they are going to mandatory overtime

because their workers are not signing up. What the workers are signing up for, faster than ever before, is their vacation schedules.

We are hearing more and more reports about real estate transactions that I think are very questionable. As probably everyone else is hearing, our banker contacts claim that it is the other lenders that are engaging in such dubious real estate financing. All of their own transactions are very soundly based on appropriate valuations. Home prices are rising very rapidly in our area. People are paying up for commercial space. We are getting anecdotal reports, scattered here and there around the District including the metropolitan areas, about rising rental rates for retail space and other commercial space.

In another report that I found interesting, directors said that the fastest rising wages that they see are teacher salaries. State, local government, and school district tax receipts are coming in very strong and they are being spent on worker compensation. We hear bankers, in particular, who say that when they lose lower level workers in their organizations, they typically lose them to schools or to city governments. One of the large banks that operates in most of the states in our region said that they came into the period expecting good commercial loan demand, and it has been very strong. What has surprised them, though, was that consumer loan demand, which had previously tended to weaken, has rebounded very sharply. They also asserted that credit quality standards definitely have been lowered as a result of what they said is shoddy underwriting by syndicators. Finally, as an illustration of labor market flexibility, we saw a report that United Parcel Service would be expanding greatly its operations in Louisville, in Bill Poole's District. A bank that has a significant credit card operation in Louisville said that was not a problem for them; they were going to shut that operation down and move to some other

place where there was a bigger pool of labor. They were not going to compete with UPS for workers.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. Mr. Chairman, Twelfth District economic growth accelerated in 1997, led by a surging California economy. We believe that the District economy entered 1998 with considerable momentum. Recently revised figures show that growth in California payroll employment jumped to 3.8 percent in 1997, about a percentage point greater than in 1996 and also a percentage point greater than the increase for the nation as a whole. The pickup occurred in most major sectors, but not surprisingly it was largest in the construction industry where employment grew by over 11 percent. Furthermore, we see that all areas of the State of California shared in that surge. The most pronounced acceleration occurred in Southern California, led by San Diego and several counties that surround Los Angeles County. Although demographic factors held growth in Los Angeles below that of the rest of the state, the Los Angeles economy did pick up substantially in 1997. Employment grew at a solid rate, unemployment declined by nearly 1½ percentage points, and the housing market improved considerably.

For the state as a whole in 1998, a weather-related pause in January employment growth was followed by strong expansion in February, suggesting that California remains on or close to the path that we saw in 1997. As the California economy continues to heat up, there are signs of a shift in economic activity away from other states in the District. Employment and construction indicators generally showed that Nevada, Arizona, Oregon, Utah, Washington, and Idaho all expanded less rapidly in 1997 than they did in 1996. Despite the gradual cooling trend outside of California, the District as a whole remains on a stellar growth path.

One development that we are watching carefully is the impact of conditions in Southeast Asia, which certainly are having a moderating effect on District export sales of various agricultural and manufactured products. But the net impact on employment growth in our region is quite limited to date.

At the national level, the economy has once again shown surprising strength. Indeed, our monthly indicators model projects first-quarter real GDP growth well above the Greenbook estimate. It is in the low 4 percent range. Some of this strength may be transitory, perhaps a result of unusually warm weather. If that turns out to be the case, then the robust expansion in the first quarter may have little implication for the longer-run outlook because it may be the result of some borrowing from the second quarter. However, we think it is more likely that the considerable momentum of the first quarter will carry forward. The latest gains in disposable income, which should support further purchases by households, are particularly impressive in this regard. Thus, at the current funds rate and even taking into account the fallout from East Asia and a slowdown in inventory investment, we see real GDP growth remaining near potential throughout the remaining quarters of 1998. Given our outlook for real growth, there is little question that labor markets will remain very tight this year. There is already significant upward pressure on wages and salaries, and we see annual compensation growth increasing several tenths this year and again next year. However, as all of us have noted, the outlook for prices is considerably more favorable than that for wages. With falling import prices, lower prices for oil and other commodities, as well as recent productivity enhancements and additions to capacity, core price inflation probably should come in at a rate of around 2 percent. This would certainly represent further modest progress toward our objective of price stability.

Looking beyond this year, it is uncertain in my view whether the special factors moderating inflation will endure and whether our recent progress toward price stability can be maintained. Thank you.

CHAIRMAN GREENSPAN. President Moskow.

MR. MOSKOW. Thank you, Mr. Chairman. The pace of economic expansion in the Seventh District has picked up since the beginning of the year. Mild winter weather explains part, but not all, of the reported strengthening in retail sales and our very robust housing market. In contrast to the slowing seen in the nation, expansion in our manufacturing sector has accelerated. The March results of the Chicago Purchasing Managers' survey released this morning show an increase in the overall index from 57.8 in February to 59.5 in March, paced by sharp increases in both production and new orders. Consumer surveys from Detroit and Milwaukee had shown a pickup in the pace of retail sales expansion in January and again in February. Output growth in our manufacturing sector has started to exceed that in the nation, which may reflect the Asian situation since we expect that other areas will be affected more than our region.

Since our last meeting, I have visited several areas of our District. In addition, our academic advisory and our agriculture, labor, and small business advisory councils met recently and we had meetings of our Chicago and Detroit boards of directors. Several common themes emerged from these meetings: first, labor markets remain very tight; second, health insurance costs are rising; and third, Asian developments have not yet had much of an impact. We continue to hear about new ways that employers are using to deal with tight labor markets. For example, many contacts noted the increased use of apprenticeship programs in the construction industry. We were pleased to hear that apprentice and pre-apprentice programs for electricians

and carpenters are being reestablished in the city of Chicago as opposed to the suburbs. These programs draw on the unemployed in the inner city. In Peoria, a high-tech jobs training center is being built and sponsored jointly by a local university, high schools, employers, and the state employment service. All the sponsors will be located in the new building in order to ensure that the high-tech training reflects the needs of local employers. We even have heard that temporary help firms are using temporary help. [Laughter] One labor union contact told us a real first: A temporary help firm solicited striking workers on a picket line for temporary assignments elsewhere. [Laughter]

In terms of the Asian situation, most of our directors and council members felt that the Asian impact on net exports would not be large. Still, we have heard various anecdotes that indicate an Asian impact on some types of exports and imports. Pork sales to Asia are down significantly, and we are importing container board from Japan for the first time in our contact's memory. In the auto industry, some domestic light vehicle production has been cut as a result of softening export sales to Asia. Import sales of light vehicles have increased, although mostly sales of European rather than Asian models. Korean imports have doubled their market share of motor vehicle sales from .7 to 1.4 percent. I guess it's not surprising since they are offering \$2,000 rebates on cars selling for \$12,000. All of us have heard that Asian firms are having difficulty obtaining trade finance, but several auto industry contacts speculate that the Japanese auto firms have not increased exports to the United States because of political considerations.

Turning to the national outlook, I continue to be impressed by the strength of the domestic economy. Consumer fundamentals are strong and firms seem poised to remain big spenders for high-tech capital goods over the next few quarters. As in January, we expect net exports and inventory investment to be the largest drags on GDP growth this year, though our

outlook for a depressing Asian effect is somewhat less pessimistic now than it was two months ago. All told, we expect to see GDP growth of about 2½ percent this year, with some slight pickup in inflation over last year's levels.

Last week I met with eight economists comprising our academic advisory council. Most council members attributed measured inflation's recent low levels to a variety of special factors. These include the dollar's recent appreciation and the deceleration of medical care costs as well as the continued methodological changes implemented by the BLS. Every council member expects inflation to accelerate noticeably over the next 12 months, the consequence of tight labor markets and GDP growth consistently above its trend rate. The council was nearly unanimous in its view that monetary policy should be tightened over the next few months.

In summary, I remain concerned that the domestic economy's strength will outweigh any negative effects arising from the turmoil in Asia. At our currently high resource utilization rates, this strength threatens to generate noticeable price pressures over the forecast horizon. Although in January I viewed the risks as somewhat balanced, I now view the risks going forward as tilted toward the upside.

MS. RIVLIN. Mike, excuse me, but what were your academics saying a year ago?

MR. MOSKOW. Several were saying the opposite a year ago. It was much more of a mixed picture, with some saying that we should be tightening and others indicating that things were just fine and we should not change our policy. But for the first time at the latest meeting, they were virtually unanimous in the view that some tightening would be needed. It was a surprise to us.

CHAIRMAN GREENSPAN. President Boehne.

MR. BOEHNE. Thank you, Mr. Chairman. The economy in the Philadelphia District is growing at the same rapid pace as last year. Job growth has expanded to all sectors including manufacturing, which had been a drag on the regional economy. Labor markets are very tight. Compensation costs are rising, but apparently so is productivity growth. There is little evidence of rising inflation.

As others have said, the anecdotal comments from the business community revolve mostly around people issues. The most frequently heard comment is that qualified workers are scarce and they are becoming more expensive. There is more job-hopping as compensation is bid up. One labor leader told me that the building trades are having trouble attracting qualified workers because wages in manufacturing have now surpassed those in construction.

For the first time in several years, I also am hearing comments about a shift in the psychology of the workplace. In the wake of corporate downsizing, there was job insecurity and people tended to work longer and harder. Now there is an emerging view among workers that they cannot keep up the pace any longer. It would appear that job insecurity is beginning to turn the other way, and workers are looking for things like more vacations and more predictability in their work schedules. If they're not getting that from their current employer, they can get a job somewhere else with a significant increase in pay. In conjunction with the tightness in the labor market and the increasing costs associated with it, I continue to hear stories about the pervasive use of technology throughout the economy to increase productivity. It is one story after another, and one gets the sense that the end is nowhere in sight, that we are in one of those periods where this process is likely to go on for some time.

Turning to the national economy, it seems that we are still being dealt the same hand that we have been dealt for a number of months. We have ongoing strength in demand and very

tight labor markets that by past standards should be causing inflation to accelerate, but that acceleration is not happening. We also have the card that points to some prospective slowing in the pace of demand, and that slowing is not materializing either. We all hear anecdotally about significant productivity growth, but it is not being captured fully in the statistics. I also think we have the same hand being dealt to us as far as policy goes. That is a wait-and-see policy versus some kind of preemptive action. We will be talking about that later.

CHAIRMAN GREENSPAN. President Guynn.

MR. GUYNN. Thank you, Mr. Chairman. I would characterize the overall growth of our region's economy as moderate, at least by our District's standards, in that growth in our region has fallen back to national trends in the last several quarters after leading the nation through the early years of this expansion. With a couple of notable exceptions, I currently see few signs of imbalances in our regional economy.

Housing activity continues to be mixed but at a high level, with increases in sales of single-family homes offset to a substantial extent by declines throughout the region in the multifamily sector. We have generally healthy commercial real estate markets, but to repeat a comment that I made at the last two meetings, I continue to see some worrisome signs of speculative commercial development in Atlanta. Planned expansions in Atlanta are estimated to be about double the current absorption rate for the coming year. I would emphasize that this real estate activity is concentrated in Atlanta and is not representative of the region as a whole. Nonetheless, it is a development that I think I need to continue to watch.

Tourism in our major tourist centers is very strong. One measure of just how strong is the unavailability of airline seats on most flights into Florida, where hotel and cruise ship bookings are quite heavy into the future.

It is also becoming clear that there are both positive and negative impacts on the domestic economy from Asia. A positive example comes from one of our directors who builds roof trusses for houses and small commercial buildings. He reports that because of the very wet weather, it has been nearly impossible for heavy equipment to get into southern forests to harvest southern yellow pine, and the price of such lumber has increased significantly. However, the price run-up of pine lumber resulting from the supply squeeze has been muted by the influx of West Coast spruce and fir. The drop-off in demand from Asia for that West Coast lumber and its diversion to our region has come with price cuts of about 25 percent.

Lastly, as far as the region is concerned, I would be remiss if I did not add our perspective to the current availability and cost of labor. To no one's surprise, labor markets in our area also remain tight and continue to press employers to look even harder for opportunities to substitute capital for scarce labor. To add one more story of productivity gains, on a swing I made through north Alabama two weeks ago, _____ who manages an agricultural conglomerate told me about a new piece of equipment. The equipment is configured so as to

allow each pass of the equipment through the fields to till or harvest 12 rows instead of the previous 10, a very appreciable increase in productivity. part of the resulting savings was retained by and part was used to raise the hourly wages of the workers by about 15 percent. I continue to get similar reports from almost every industry contact that I talk to. It is clear that efforts to achieve productivity gains are still meeting with some success.

As far as the national outlook is concerned, our judgmental forecast is extremely close to the Greenbook's this time and similar to others that already have been laid out around the table. I agree that the near-term outlook is good to excellent. Given this agreement on the near term and the lack of immediate policy action that it seems to suggest, our focus should continue to be on the longer term over which many forecasts have inflation rising after 1999. Here we must acknowledge that we have tended to over-forecast inflation and under-forecast growth during this decade. Speaking for myself, this is the type of error I can live with if it does not lead us into policy missteps, which I think we have avoided so far. Still, seeing the past pattern of forecast errors, I am concerned that we may be lulled into discounting the current inflation forecast too much and risk waiting too long before the required policy move is made.

I suspect that many forecasts implicitly assume that the FOMC will behave as it has in the past, and if we do, I think inflation certainly should be expected to rise. Our Atlanta baseline model forecast explicitly assumes that we will behave as in the past, and it indicates that on average we have tended to ease policy when growth was in the range we are now forecasting for a substantial period ahead and when inflation was low and falling. The model shows that later, but not much later, inflation has tended to accelerate, demonstrating the kind of policy mistake we need to guard against.

I think this history cautions us to be leery of suggestions that the recent low inflation, whatever the source, provides an opportunity to ease policy. This leads me back to thinking about how much to discount the current inflation forecasts, which tend to show an acceleration several years down the road, something almost all of us have said we find unacceptable. Our model suggests that if we stick to our current policy position and do not repeat the pattern of easing when growth seems to be slowing and inflation to be declining, then I think we can comfortably discount the forecast of worsening inflation. It is for those reasons that I think we can afford to wait for a while to see if the disruptions in the real economy do or do not materialize. Thank you.

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. Thank you, Mr. Chairman. The economy in the Tenth Federal Reserve District remains quite healthy. It appears to be growing at a faster rate than the nation so far this year. For example, we estimate that total employment rose at an annual rate of 7 percent in the first two months of 1998, quite a bit faster than the increase for the nation. Some of the surge in employment was due to the warm weather, which had a favorable effect on construction activity in our region, but other sectors also added jobs across the District. Labor markets remain quite tight, with some continued evidence of wage pressures coming through. As in the last several months, about half the firms we have contacted said that they were responding to labor shortages by raising wages more than normal.

District firms report that they continue to operate at very high levels of capacity. Manufacturing remains strong. The farm economy continues to do well, although there are some signs of weakness related to developments in Asia. For example, contracts in the food industry show reduced exports to Asia this year. District energy activity also has slowed in response to

the sharply lower oil prices. The District rig count has fallen about 20 percent since the beginning of the year. Retail sales have been quite healthy in the District, partly due to good weather, but again the gains have been broadly based across the District.

Despite the concerns about credit quality nationwide, lending standards in the District as they are reported to us do not appear to have deteriorated a great deal. At the same time, we are beginning to hear anecdotal stories of some speculative activities. I will share just a couple with you. In one of the resort areas in Colorado--not Vail or Aspen but one of the more modest resort areas--condominiums were offered for sale prior to construction. The prices that were considered minimum in the bid process could not cover the required cash flow even if the condominiums were rented every day of the year. Yet, people were standing in line to buy one unit at a minimum and they were often going for two. Another example relates to the recent experience of a small investment firm with a good reputation that offered shares in a new fund. They were trying to raise about one-half billion dollars for investment purposes. They started the new fund in January, and when I asked them recently how they were doing, they indicated that so far they had been offered about \$1½ billion to invest. One of their examples of investor interest was that although they did not want to take more than \$20 million from any one investor, a couple of them insisted on their taking at least \$60 million. So, some of the anecdotal reports that we are getting suggest a degree of optimism and speculation that we have not seen for some time in our region.

More generally, our forecasts relating to the broad domestic economy are not unlike others. We see a very strong economy and one that we expect will remain strong. The contributing factors are the obvious ones: low interest rates, high consumer confidence, strong incomes and employment, and, of course, the stock market. We do expect some moderation in

growth due to weakness in net exports and to inventory corrections that might occur. However, we think that the risks to the expansion are on the upside in the context of improvements in productivity that may continue on a more permanent than expected basis as a result of persisting high rates of investment and further improvements in technology. But we also recognize that inflation has been held down by some temporary factors. How temporary is, of course, the question. These factors are the prices of food, oil, and imports. As these favorable price trends unwind, I think we're going to see some fairly substantial pressures toward increased inflation, given our forecast of an economy that remains very strong on the domestic front. Thank you.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. Thank you, Mr. Chairman. The economy in New England continues to be strong. Actually, on the basis of revised benchmark data, it is a little stronger than we thought it was in 1997 and early 1998. Tight labor market conditions prevail, as do strong real estate markets in most areas, and good, if not great, prospects for the tourist industry and investment management firms, just to name two businesses. Manufacturing reports are a bit more mixed. Some firms are doing quite well as a result of accelerating demand for aircraft and heavy truck parts, furniture, and equipment. Others, especially in the equipment and high-tech industries, are holding their own or experiencing some difficulties in the face of cheaper imports and difficulties in their Asian markets.

In general, the impact of Asia seems wider than at the time of the last meeting. Nearly all the manufacturers we talk to either have felt some impact so far from Asia or expect, directly or indirectly, such an impact by midyear. The nature of the Asian impact can be both negative and positive, echoing a little of what President Guynn said. On the negative side, firms have been affected by the cancellation of orders from their Asian customers, and several have

associated layoffs with this problem, including in one case the closing of an entire plant. In addition, some contacts have indicated that they have had to supply financing to Asian customers or suppliers who are unable to get credit through normal sources. On the positive side, however, many of our contacts report that lower prices have led them to increase their purchases in Asia, and they are trying to move more manufacturing to that region to take advantage of lower production costs. It will take some time for them to make these changes in cases where existing business relationships are constrained by long-term contracts.

As I noted before, labor markets are very tight and one hears anecdotally about difficulties in hiring beyond high-tech employees who have been a problem for some time in New England. Even entry-level employees, particularly in the hotel and tourism industries, are difficult to find. At the Bank, we have begun to experience turnover in our night check-clearing staff that is making it difficult to absorb the increased processing that resulted from the closing of our RCPC in Lewiston, Maine. Contacts tell us that firms continue to pursue a number of strategies to cope with hiring difficulties. The latter include on-the-job training to improve efficiency and efforts to accommodate the mix between job and family life situations, as well as selective increases in wages, benefits, and bonus pools. Even the very hard to employ and particularly those who are targeted by the Federal welfare-to-work legislation are being courted in Boston by such firms as Marriott, which is designing special training programs aimed at making these people employable and employed in the hotel industry. This objective will be very hard to achieve, and one can only hope that the effort will be successful.

On the national scene we, like the Greenbook, have increased our estimate of 1998 GDP, so we still stand a little above the staff forecast. Our forecast is based on the strength of employment, residential construction, consumer durable expenditures, and business investment

so far this year. We agree that there will be a drag from Asia and an inventory correction as well, but we fully expect that domestic demand will be strong enough to withstand these negative forces and keep the economy from slowing much below potential over the remainder of this year. We, like the Greenbook, see 1999 growth about at potential, though we have been hesitant to forecast a stock market correction. Our forecast shows unemployment declining and core inflation rising a bit more than in the Greenbook, but taken altogether that is not a bad prospect.

Where we are concerned is in the assessment of the risks. Mike Prell picked up a little of that concern in his presentation as well. At our last meeting, I and a lot of other people thought that the risks to the forecast were roughly balanced. I could see the potential for negative as well as positive surprises. Now it seems that the risks are more on the upside again. Domestic growth is stronger than expected. Wage and benefit increases have crept up by some measures into the 4 percent range, particularly in services. There are selected price increases in service industries. Comments around the table have reflected on indications of more speculation in real estate activity. This speculation is fed by financial markets, which are extremely accommodative. From every perspective that we can see in our region and nationally, monetary policy is not tight; it is not even neutral. It is accommodative to an increasingly speculative environment.

Sure, there are negatives. We have yet to see the full brunt of Asian developments. Inventory levels may correct. The temporarily benign influences of low benefit costs, growing productivity, increases in dollar exchange rates, and declining oil prices may be about to shift. I think the question for today is how long the current situation can last before tighter monetary policy is warranted or, more specifically, how long we can wait before we have waited too long.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. After a year of exceptionally strong economic performance in 1997 and into 1998, the economy of the Dallas region has recently begun to show some signs of softening, or at least expectations and early hints of softening. Lower oil prices, the effects of the Asian crisis, and continued labor market tightness are key factors responsible for the spreading expectation of slower growth. The recent sharp drop in oil prices, which was partially reversed last week, has done a lot to shake business confidence in Texas. As of just over a week ago, real oil prices had slipped by over \$8 per barrel since October and were at their lowest level since 1933. If that 20 percent reduction had not been reversed, research at the Dallas Fed suggests that there would have been long-term employment losses of between ½ and 1 percent of the workforces in Texas, Louisiana, and New Mexico. While this is probably only about one-third of the impact that would have resulted from similar oil price declines in the mid-1980s, it nonetheless would represent an inflection point of the District's growth trajectory of recent years. Combined with the weakness in petrochemicals, semiconductors, and agricultural commodities stemming from reduced Asian demand, the weakness in oil prices has the potential to set the growth trend in the Eleventh District on a divergent path from the nation.

Lower financing costs have added to the construction boom in Texas. Commercial construction remains strong and large new projects are announced almost daily. At our small business advisory council meeting two weeks ago, one of the members commented that several of his law firm's clients have decided in recent months to become real estate developers, probably a sign of trouble. [Laughter] I don't know if that included Jerry Jordan's guy or not. With the increased uncertainty about energy prices and the impact on growth trends in Texas, some of this building activity might be looked back on as irrational exuberance a couple of years from now if oil prices stabilize around \$14. We are encouraged somewhat by recent reports

from Houston that oil companies have begun to cut back on office expansion plans that were developed earlier. Additional evidence on market sensitivity to the changing situation comes from anecdotes that lenders in Houston are becoming more conservative about construction loans for speculative building.

Mexico adds to the downside risks facing the Texas economy. I suppose you saw the "Salt and Pepper" cartoon in the Wall Street Journal the other day that said, "You can live the American dream working for a Japanese company in Mexico." So far, the Mexican economy has held up well, given its reduced competitiveness with Asian countries and its reduced revenue from oil production. We continue to get reports that Mexican shoppers are back in force in Texas retail stores along the border and at upscale stores in Houston and San Antonio. Whether this reflects an overvalued currency or just a strong recovery in Mexico is an open question.

My tight labor market anecdote of the month from the Eleventh District is that a competitor of Texas Instruments put up a billboard across the freeway from the Texas Instruments headquarters in Dallas. On the billboard it said, "Why did the engineer cross the road? To get a better job." [Laughter]

The national economy seems more like two economies these days, with the foreign trade goods sector showing signs of weakness while activity in the nontrade goods sector has accelerated of late. Price pressures remain subdued, but the core CPI statistics are beginning to be a source of concern. I am not inclined, however, to react to labor market tightness as long as businesses continue to be innovative and creative in holding down labor costs in the face of stiff competitive pressures in the markets for goods and services. M2 is growing too fast for comfort, but I do take comfort from market-based indicators of monetary policy, such as a strong dollar and weak commodity prices, as well as the prospective impact of Asia.

CHAIRMAN GREENSPAN. President Broadus.

MR. BROADDUS. In keeping with most of the other comments around this table--I guess Bob McTeer's comments are an exception today--our District economy seems by all accounts to have remained very strong. There are some indications in the manufacturing sector that shipments may be softening a bit, but orders remain quite strong. Like Jack Guynn and some others, we have gotten occasional comments from folks indicating that the Asian situation is having some negative impact in particular industries, especially in the paperboard industry. A manufacturer told us that paperboard orders from Korea and Indonesia recently have fallen sharply, but those stories are the exception rather than the rule. Manufacturing is very important in our region and most manufacturers are quite optimistic for the longer term. In general, they are expecting total shipments, domestic plus exports, to be higher and perhaps significantly higher six months from now than they are now.

Elsewhere, in the words of one of our retail contacts, consumer spending is "going great guns." Auto sales may be a little spotty, but they are higher than most dealers had expected them to be not too long ago. Our housing sector remains very strong, and we hear more and more tales about speculative building. We have had a lot of anecdotal reports on tight labor markets and I, too, hesitate to add any more, but that is what most of our contacts want to talk about. At our small business council meeting a couple of weeks ago, a member who runs an employment agency here in Washington reported that her firm no longer counsels prospective employees on how to attract prospective employers. Rather, she counsels "candidate" employers on how to attract employees, especially high-tech folks but others as well. She also told us that \$40,000+ salaries for senior level executive secretaries and other high level administrative people are not at all uncommon in this market.

runs a small

manufacturing company. He told us that he recently lost a programmer who was making \$50,000 for a salary almost twice that level. He now defines a "hot job prospect" as somebody who shows up for an interview and passes a drug test. [Laughter] And he is working on introducing robot technology into his operations!

On the national economy, we now have at least some hard evidence as opposed to pure predictions that the Asian problem is having some negative impact on U.S. net exports. Obviously, we need to watch that situation and give it weight in our deliberations. But, as Jack Guynn and Cathy Minehan mentioned, the Asian situation has another side to it. It is also having effects that are helping to strengthen already robust U.S. domestic demand, helping to keep the inflation rate down, helping therefore to keep real wages up, and also helping to keep U.S. interest rates down.

On balance, I think it's reasonably clear that at least during the period since our last meeting, the strengthening in domestic demand has outstripped whatever negative impact is in fact coming from Asia. The Greenbook obviously has recognized this with what in my experience is a fairly striking upward revision from one meeting to the next in the projected growth of real GDP for the coming year. I still think, and Mike Prell said the staff has this view as well, that the risk is on the upside in this projection. I have felt that all along and I feel it even more strongly now, especially with respect to inflation.

In this regard, it is interesting to note that almost all of the Greenbook's projected decline in real GDP is accounted for by a drop in productivity growth, as several people have noted already. This means that labor markets are expected to remain tight over the forecast horizon. It is a little surprising to me that despite this extraordinary job market tightness and widespread expectations that health care costs are going to move up, the Greenbook does not

project a further increase in the growth rate of ECI compensation for 1998 over 1997. Unit labor costs in the projection do rise as a result of the weak productivity growth. So, we do get a projected .3 percentage point increase, on a consistently measured basis, in both the core CPI and the core PCE measures of inflation. Obviously, if compensation moves up more strongly than the staff is expecting, that would compound any upward push on prices emanating from labor markets.

Approaching the inflation risk from a different direction, as we all know M2 growth has accelerated sharply of late. I am well aware of the tax and refund effects that may explain part of this strength, and I know that M2 velocity is still subject to a lot of uncertainty. Even so, I think it would be a mistake to overlook what might be the most straightforward explanation of this strong M2 growth, namely that domestic demand is very, very strong currently. Thank you.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. Thank you, Mr. Chairman. Let me start by commenting on three or four characteristics of the District economy, some of which are by now familiar and some perhaps less so. I will then talk a little about the national economy.

With regard to the District, nearly all sectors of the regional economy remain very strong. For example, District employment is up about 3½ percent from early 1997 to early 1998. In Minnesota it is up over 4 percent. What is really remarkable, if not startling, about those numbers is where the new workers are coming from. We do not exactly get Sunbelt immigration rates in our District! [Laughter] It is a very impressive performance.

CHAIRMAN GREENSPAN. Are you going to answer that question?

MR. STERN. I think part of the explanation is that people are taking second and even third jobs. I wasn't going to get into the anecdotal competition on this. [Laughter] We do hear

stories about places like Mall of America that are sufficiently desperate that they will hire a worker, if they can find one, who for whatever reason is willing to work only from 4:00 in the afternoon until 8:00 in the evening three days a week. These are people who obviously are doing other things much of the time. We hear that some of them may be in the process of taking their third job.

On the other hand, we are seeing something that we have not observed since probably the mid-1980s. I don't want to exaggerate this, but we see some indications that a two-tier economy is developing where the urban areas are doing better than the rural areas. The principal problem in the rural areas is agriculture. There it is partially a question of commodity prices--and Asia may be having some effect--and partially a question of growing conditions, which right now are not terribly favorable. Having said that, there is always a problem with every generalization, and the energy sector, which is of course rural, and the iron ore industry, which is also rural, are both doing very well at the moment.

The third and final regional characteristic I want to comment on relates to shortages. I will not comment further about the labor situation, but there is a related shortage of housing, particularly in those rural areas where employment has gone up. In the metropolitan areas, I think housing construction has been sufficiently strong to more or less keep up with housing demand. There has been a shortage of office space, but that is in the process of being alleviated and it probably will disappear in the next several years. There are now five significant office projects under way in downtown Minneapolis and at least two in downtown St. Paul. Developers report uniformly that they have no problem finding financing.

As far as the national economy is concerned, overall I must say conditions look very good to me. Real growth, both current and prospective, seems secure, and I believe inflation will

remain low at least for some time. If I wanted to worry, I think I would worry about the following things, especially in the context of the Greenbook forecast. One is that the Greenbook seems to have a very favorable nominal wage adjustment in the face of very tight labor market conditions. I worry a little about whether we really ought to expect that to happen. I also worry about the role of a stock price decline in that forecast. I do not have a conviction about stock prices, and I would not premise a forecast on it. I guess, like Larry Promisel, I'm not quite as negative as the Greenbook about the foreign trade situation, at least longer term. I must admit that growth in M2 is starting to concern me a little.

In my view, the kicker here is productivity. I don't want to get caught up in how we measure productivity, but all of those adverse factors can be offset if productivity is on a fundamentally more favorable trend. Certainly, business people have asserted for a long time that it is and they continue to do so. They also continue to indicate that it is very hard to make price increases stick. Indeed, a more favorable underlying or fundamental trend of productivity would help to rationalize stock prices. I think I will stop there.

CHAIRMAN GREENSPAN. Why don't we take a break because if we go through the rest of the speakers, we will have our coffee break after lunch! Let's allocate 10 minutes.

[Coffee break]

MR. POOLE. As in most of the rest of the country, conditions in the Eighth District are strong and labor markets are very tight. The unemployment rate in the Eighth District is actually a bit below the national average. Rather than repeat the kinds of anecdotes we have heard before along those lines, I would like to emphasize my interpretation of the Asian situation because I think we are all searching for that as the key to understanding where we are.

In my view there are three analytically distinct effects on the U.S. economy that flow from Asia. One is the trade effect. If we search, we find firms and industries that are impacted by reduced Asian demand for U.S. goods. In the Eighth District, we see this in food processing, including chickens. I was surprised to discover how high a fraction of District food exports go to Asia.

Secondly, after the summer, as the impacts of Asian developments and the appreciation of those impacts grew, we obviously had declining interest rates. I think that came about for two reasons: one, safe-haven money came to the United States; secondly, there emerged a view in U.S. markets that the Asian impacts would slow the economy and that the odds on monetary policy becoming easier or tighter had changed. That was an indirect effect from Asia. I suspect that the second reason relating to the outlook for monetary policy was much more important than the safe-haven money that came here. Obviously, the lower interest rates are unambiguously expansionary for the U.S. economy.

The third analytically distinct impact is lower oil prices that have come about from the decline in Asian demand for oil. The lower prices have had mixed effects in the United States. The firms and the regions that specialize in oil production are obviously impacted negatively, but the overall impact is positive because we have a lot of oil consumers who are benefiting.

My overall assessment is that Asia is primarily a relative demand shock rather than an aggregate demand shock for the United States. We have shifts in the mix of demands in the U.S. economy. I believe we need to appreciate especially that the particular impacts we see in the trade account and in the oil regions are easy to spot. That is, they involve particular firms, whereas the generalized effects on consumers that come from lower interest rates and lower oil

prices are much more diffuse. I think they are much more important but easier to miss precisely because they are so widespread.

Overall, it seems to me that slower U.S. growth than that seen in recent quarters is likely but primarily because of resource constraints. Economic activity is bumping along, it seems to me, above and beyond capacity. I do not see slower growth in aggregate demand because I believe the underpinnings for further growth in aggregate demand are very strong. There are many signs of booming demand. The ones that impress me are the recent rapid growth of income, output, and consumer demand that is fed by rising asset prices everywhere one looks--equities, bonds, real estate--and high and rising money growth, however defined. This is not an issue of exactly what monetary aggregate is one's favorite since all of the Ms are giving the same kind of picture. We also have tight labor markets and wage pressures. In sum, I don't see anything in current economic conditions that suggests significant negatives in our outlook.

CHAIRMAN GREENSPAN. Governor Rivlin.

MS. RIVLIN. I think the FOMC is in a difficult spot though I don't expect we will get much sympathy. [Laughter] Our difficulties, as Bill Poole just pointed out, stem not because anything bad is happening but precisely because so little bad is happening. The economy is performing as well as it ever has and probably as well as any economy ever has, which is a mind boggling thought. People are producing and consuming and working and investing at higher levels than anywhere before. Better than that, the economy's adjustment mechanisms seem to be working better than they ever have, here or elsewhere. Capacity has expanded and modernized at the same time. Companies have learned how to manage inventories. Labor markets seem to be functioning well in moving people to where they are needed most. Shortages, bottlenecks, strikes--imbalances that characterized boom periods in the past--do not seem evident, although

we all have been looking hard to find some of these imbalances. Even world events are supporting the good performance of the U.S. economy. That is especially true, again as Bill Poole just pointed out, with respect to the price of oil. The latter seems to have fallen far enough to help our oil-consuming industries, which are most of our industries, without hurting our oil-producing sector so much as to create widespread problems, although Bob McTeer has pointed to some problems. It is hard to find any villains in this piece when one looks at the usual suspects. Even politicians seem to be behaving reasonably well.

Some reports around this table, quite a few actually, point to speculative building. We have not yet had an evident boom in nonresidential construction, although we may. There are a lot of reports of labor shortages but also considerable evidence that the response has been flexible, targeted compensation increases coupled with cost-cutting in nonlabor areas. There also are reports that companies are leaving jobs unfilled or even expanding in different locations rather than bidding wages up. Only the stock market seems out of line, and there is some evidence even there that investors are responding sensibly to earnings declines in particular stocks. The view that equities are a good long-run investment might indicate that investors would not panic in the event of a significant stock market correction. All of this makes policymaking quite hard for us.

Our job is to keep the good news flowing, and we are quite sure that the economy cannot expand much longer at its current pace without running out of workers and setting off a process of labor cost increases followed by price increases. So, we would like to take out some insurance by slowing things down a tad. But it is not clear that we have a policy instrument that will do that. The real federal funds rate is already quite high; raising it a notch or two might not raise long rates for some of the reasons that have been mentioned. It might not have much of an

effect. Conversely, there may be some danger that an increase would be seen as too strong a signal, especially to the stock market, and might induce some panic selling since we have not signaled that we were about to do anything like that. I lean to the notion that it probably would not have much effect, but there's no way to guarantee that outcome.

By May, we might be either more or less worried about overheating. If, as the staff projects, the expansion slows because of the Asian effects and for other reasons, the prospects of overheating might seem less serious. But the risk that it will not slow and that labor cost pressures will be building even more is certainly there and has been voiced around this table. The good news, it seems to me, is that there is almost no evidence that we could get surprised by a rapid spurt of inflation. If anything seems clear about the economy, it is that its adjustment mechanisms are well oiled at the moment so that we are unlikely to be surprised by sudden lurches. That is comforting if we decide to do nothing.

CHAIRMAN GREENSPAN. Governor Meyer.

MR. MEYER. Thank you, Mr. Chairman. I want to focus on three aspects of continuity in the developments since the last meeting. First, there has been continued exceptional momentum in private domestic demand and payroll employment, only partially offset by a decline in net exports. Second, the strength in domestic demand has continued to be supported by very favorable financial conditions, including soaring equity prices. Third, favorable supply shocks, reinforced in this case by a sharper-than-expected decline in oil prices, have continued to restrain inflation.

I continue to accord an important role, indeed a central role, to favorable supply shocks in explaining recent economic performance and assessing an appropriate course for monetary policy. When there is an adverse supply shock, it is well appreciated that the bad news

cannot be escaped, only shared in the near term between higher unemployment and higher inflation. And so it is with a favorable supply shock, only substituting good news for bad news. Policymakers cannot escape the benefits no matter how they might try. [Laughter] They can only influence how the benefits are shared between lower unemployment and lower inflation.

There is, of course, much to like in the outcome of low unemployment and low inflation and in the policy that has supported that outcome, so far at least. In particular, it is not imprudent to operate for a while beyond the point of long-run sustainable capacity as part of the sharing of the benefits of the supply shock. Still, the optimal course of policy in this case depends on the expected persistence of the shock, although the length of time it persists is sometimes as much of a surprise as the shock itself. At any rate, the longer-than-expected persistence or renewal of the favorable supply shocks has certainly contributed to the very favorable outcome and to how brilliant monetary policy appears after the fact. The danger in this policy is the possibility of misperceiving the sustainability of the recent performance and therefore of failing to appreciate the necessity of a transition at some point to a more sustainable state. Given the transition that must ultimately be made, it might be unwise to move still further beyond the point of sustainable capacity.

The key to the Greenbook forecast is the projected slowdown immediately ahead in the rate of economic expansion to below trend growth. The Greenbook forecast shares this feature with almost all private sector forecasts. This is worrisome because my experience as a forecaster suggests that forecasters can get it all wrong, but they almost never get it all right. At any rate, I have described this widely shared forecast as tracing out a graceful reverse soft landing. Because the economy slows almost immediately to below trend growth, it moves gradually from its initial point beyond sustainable capacity toward sustainable capacity just as

the favorable supply shocks that are restraining inflation dissipate. The result is an economy that glides toward full employment with still low inflation as we reach the end of the Greenbook forecast horizon. This is a remarkably favorable outcome, especially since it occurs while we play spectator.

The risks, however, seem weighted from my perspective to stronger growth and hence higher average utilization rates and, given the projected slowdown, to even sharper increases in compensation and inflation than in the Greenbook forecast. There is still a potential for further declines in the unemployment rate based on the momentum in demand before the slowdown takes hold. There is also the potential that the crosscurrents so clearly identified in the Greenbook may work out a little less favorably for price inflation, exert somewhat more pressure on nominal wage changes, and produce a somewhat sharper reversal in benefit costs. The latter developments, interacting with a slowdown in productivity growth, suggest the potential for a less benign than projected path of labor costs in coming quarters. Looking to 1999, I also am concerned that there might be a somewhat sharper reversal in the supply shocks than projected by the staff.

Financial conditions in general and monetary policy in particular have played important roles in supporting recent economic performance. Favorable financial conditions have been supporting aggregate demand, notwithstanding the sharp rise in the real federal funds rate stemming from the decline in inflation. Real long-term rates are steady to declining, equity prices are soaring, credit availability is ample, underwriting standards may have eased somewhat, loan pricing is aggressive, and money growth is rapid. True, there is good reason to project a decline in velocity in the first quarter, and there are some special factors that likely have boosted M2 growth. Still, there is a fairly clear signal in the acceleration of money growth that

should not be ignored. Financial conditions in general and monetary policy in particular clearly are not restraining aggregate demand. The projected slowdown in M2 growth in the forecast is only the mirror image of the projected slowdown in nominal income growth, reinforced by a return to a more stable velocity path. This simply indicates that if the Asian slump slows the economic expansion to the degree projected, the current setting of the funds rate is consistent with the slowing of nominal income growth and hence money growth. Policy does not slow money growth in the forecast; Asia does.

The bottom line is that a slowing in growth is essential to avoid a sharper than desirable reversal of inflation fortunes in 1999 and beyond. The Asian slump may accomplish this. Some patience has been advisable early in 1998 as we wait for evidence on the degree of momentum in domestic demand and the offset from Asia. Patience is a virtue but only to a point. We may be able to remain spectators if economic growth slows and helps to preserve the low inflation environment. But the continued momentum in demand so far this year suggests that a tighter monetary policy may still be required to slow the expansion and preserve the low inflation climate.

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. Thank you, Mr. Chairman. This is my fourth meeting. At the previous three, I felt rather confident in my advice, and I'm afraid I am now joining the cold feet crowd. Let me first make a few comments on the Greenbook forecast and then a few on policy strategy.

On the Greenbook, there is a big change in the forecast from last time that many of you have noted. A second comment is that at least one of the projected sources of the slowdown is and has been questionable to me. I think that if any of us really knew what we were talking

about with regard to stock market values, we would not be here. We would be doing something else. I have always been troubled by the forecast of a stock market decline in the sense that the stock market traders know everything that we know. They presumably know about the earnings forecasts. So, I have been troubled by the assumption that in effect we can see something that they cannot see. Mike Prell has conveniently done an alternative forecast that does not assume a stock market decline. In that forecast, growth in real GDP does not moderate to a pace below the trend rate of long-run economic growth. It gets down to about trend or maybe even a bit above it, so part of the slowdown in the staff's baseline forecast is based on the assumption of a stock market decline. There is another way to look at the stock market. If we compare price/earnings ratios to interest rates, those ratios do not necessarily look out of line. So, the market decline source of the slowdown seems a little shaky to me.

The third point I would make about the forecast, and a lot of you brought this out with your questions, is that even core inflation is not really "core." There are already a lot of positive supply shocks in that measure. Inflation could be heating up a little even as we speak, though that is not apparent if we just look at the CPI excluding food and energy.

I also want to make a few comments about policy strategy. Actually, Larry Meyer made the first when he talked about the reaction to good news. The point is that while it is great to have low unemployment, we cannot overemphasize it in relation to inflation. We have to be very careful that we know what we are doing. Other than that, Larry said it very well and I will not repeat his comments.

A second point on policy strategy is that I am among those who think that we can operate on the basis of a federal funds rate target. But the point of that target is that we have tried to work out, or others have tried to work out, the way the federal funds rate replicates or

would respond to economic events had we been following a money standard. It is as if we are following a money growth standard, but we are somehow putting aside all the supply shocks or the velocity shocks that give us so much trouble in interpreting the monetary aggregates. I think it is perfectly possible to operate with such a modified money growth standard, but we should remember that if we do so, the federal funds rate will bounce around. The risk in following a funds rate target is that we can get a target that is too rigid, and we ought to keep that in mind as well.

The third policy strategy comment is about lags. Economic conditions are great now. As Alice Rivlin says, we may be seeing the best performance of an economy ever. I am not enough of a historian to know about that, but it certainly is as good as I can remember. As we look around the world, we see that we are uniquely blessed, but we do have to look ahead. We have known that there are lags in monetary policy and we should not be conducting policy on the basis of what we see out the side door as we drive but on the basis of what we see ahead. As I look ahead, I must say that the inflation risks are beginning to get a little more threatening and the aggregate demand risks from Asia are beginning to get a little less threatening.

The last point I would like to make relates to something that to my surprise nobody has mentioned in all the meetings I have attended. I get a periodical on my desk called Fed Watch. Probably all of you get it. Every time some new statistics come out, Fed Watch says the Fed is going to have heart palpitations about this new set of numbers, but it will not do anything at this meeting or at its May meeting. I am reluctant to be that predictable. [Laughter]

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. Thank you, Mr. Chairman. During the coffee break, President Boehne suggested that he had relatively little to say this time around because he had such a short

distance to travel. My office is the nearest to this room, short of the Chairman's, so I will have even less to say this time.

Let me observe, as others have, that during the first quarter the spillover from the Asian crisis was indeed overshadowed by the strength of domestic demand. Labor markets have remained tight, as many of you have indicated. One thing I would add that we have not discussed much is that while short-term interest rates have risen to relatively high levels by historical standards, this de facto policy tightening is not associated with similar tightness at the longer end of the yield spectrum. Risk spreads for private debt instruments are quite narrow, and the extension of credit to private nonfinancial borrowers from numerous sources--commercial paper, bank lending, and so on--is running well above the pace of the last couple of years. So, I think we are in a very stimulative environment from a monetary and financial standpoint.

The second thing I would add relates to Asia. We already have talked about how little impact we have seen from developments in Asia. I have just returned from a trip to Japan during which I met with central bankers and finance ministers from the affected countries. Two things emerged from those meetings that I would like to bring to your attention. One is that both the Koreans and the Thais certainly feel that their economies are on the road to recovery, but they describe their recoveries as "U" shaped, and they expect their economies to bounce along the bottom for an extended period before they finally see some uptick. Secondly, the major economy in the region, Japan, is still facing significant challenges. During my visit, I found universal agreement that the economy was at least stagnant and probably in a recession. The fiscal stimulus packages introduced to date, the latest one totaling 16 trillion yen, are thought to be far less stimulative than they might appear. As one newspaper indicated, the most recent

package is "big, vague, and unconvincing." Therefore, I think that the United States is still likely to be the importer of last resort and that more impact is yet to be felt from Asia.

To summarize these brief comments, what risks do I see? I believe, as do a number of others, that there is an increasing inflation risk emanating from labor market tightness, from the potential ending of some of the special factors that have restrained inflation recently, and from the stimulus that is emerging from financial markets. I still see a possibility of some greater-than-desired drag from Asia, but I think that risk is less now than it was at the time of our last meeting. Overall, I believe we should be in a vigilant posture, recognizing that the risks now seem to be tilted toward the upside. I do see some dangers in a premature change in policy stance that might be too great or that would take markets by surprise. Unlike my colleague to the right, I think predictability is sometimes not a bad thing.

CHAIRMAN GREENSPAN. Vice Chair.

VICE CHAIRMAN MCDONOUGH. Mr. Chairman, the Second District is doing so well that I will not spend any time commenting on it. We have reached a point of prosperity in New York City that has led the Mayor to decide that we should now spend most of our time being nice to one another.

On the national level, what do we know now that we did not know at the last meeting? There have been some changes. From everything we have heard this morning, the Asian effect on the American economy is going to be less or at least later than we thought it might be at the last meeting. I was particularly impressed by the fact that California, the place that one would think is most vulnerable to a negative Asian shock, seems to be doing extremely well. Consumer demand is even stronger than we anticipated. We have had yet another positive supply shock coming from lower oil prices. The labor markets are tight and may be even tighter than they

were at the time of the last meeting, and there is much anecdotal discussion of some upcreep in compensation. The equity markets are overpriced in my view, but the strong flow into equity mutual funds, which was very substantial in February and appears to have been very strong in March, could well push equity prices even higher.

One very positive effect of tight labor markets, and one about which we should rejoice, is that people who normally do not get hired are getting jobs in these markets even though they may have to be trained before they are able to do these jobs. That experience prepares them better for the labor markets of the future and not just for their current jobs. However, the duration of these jobs is particularly vulnerable to the policy actions that may be needed to correct an overheated economy. So, if we are interested in sustaining that very positive aspect of our job markets, we have to be especially vigilant and not allow the economy to overheat.

On the other side, I think the problems in Asia are in no way solved. Yes, the economies of Thailand and South Korea probably have bottomed out, are bouncing along the bottom, and the policy mix in those countries is much better. Indonesia's problems certainly are in no way resolved. Japan

A continuing weak Japanese economy has an adverse effect on the world economy. Also, the persistence of such an economy would be very likely to bring to an end the relatively calm world trade environment. We in the United States are very good at grumbling and complaining and screaming, but we don't do a whole lot about it. Europeans are much better at reacting and, for better or for worse, they definitely react. It is highly likely in my view that if Japan continues to follow its present policy of allowing no growth or a recession, thereby providing a very weak market for other nations' exports and

fostering a very great desire to export themselves, we are likely to have a serious trade conflict between Japan and Europe. That would not affect the world economy in any positive way!

Since the last meeting, I think we have had a modest shift in the risks to the economy from balanced to somewhat on the high side. In my view, the positive supply shocks that we have enjoyed are sufficiently likely to continue that, for the present, we can afford the luxury of some additional waiting. But this is not a situation in which the guardian waiting in the night can allow himself to be lulled into sleep. Rather, the guardian should be even more alert. It seems to me that there has been enough of a shift in the risks toward the upside that we have to be very careful of becoming overconfident about our ability to analyze current problems and relying too much on the continuation of positive supply shocks and in fact waiting too long.

CHAIRMAN GREENSPAN. Governor Kelley.

MR. KELLEY. Thank you, Mr. Chairman. We are reaching the time of the day when all has been said. Between the briefings and the excellent comments that we have heard around the table this morning, I think we have a good understanding of where the economy is and what the issues are, and I'm not going to repeat all of that. Let me just add that I see very little, if any, evidence that this expansion is slowing now or likely to slow very much. It seems to have a tremendous amount of momentum. Consumer confidence is sky high. Employment conditions are superb. Personal income and the wealth effect are very strong. The cost and availability of credit are attractive. Inflation fears seem to be diminishing. It seems likely to me that it would take a very substantial shock to slow this economic expansion down very much, let alone bring to an end this era of very strong and attractive economic growth.

We have focused on two potential shocks to the economy that are an important key to the outlook--Asia and the stock market. In the case of Asia, I have no doubt that we will get a

We have focused on two potential shocks to the economy that are an important key to the outlook--Asia and the stock market. In the case of Asia, I have no doubt that we will get a trade shock. As Vice Chairman McDonough just said, it now appears that we will avoid the worst of the impacts that we saw as possibilities just a few months ago. I had been thinking until quite recently that our forecasts that the Asian impact was going to be "just right" were probably reasonably accurate, but I am beginning to lean to the view that the Asian impact may turn out to be somewhat less than "just right." I appreciated Bill Poole's comments to that effect a little earlier, if I understood him correctly.

In the case of the stock market, I have no doubt that sentiment is going to change some day. I remember that after a brilliant period for investors in the 1960s, we experienced what amounted to a 14-year bear market starting in 1968 and lasting until 1982. I am not predicting that outcome, but some day the euphoria we are witnessing now will change. The change may occur today, next month, next year--who knows. However, left to its own devices, there is a great deal of momentum in the stock market also. Serious weakness that could have a material impact on macroeconomic performance could be a long time off.

In short, I agree with others who have said over the course of the morning that the risks now clearly appear to be to the upside. In my view a move to tighten is becoming increasingly advisable, although I do not think the case for such a move is compelling today. I would agree with the comments of President Minehan a little earlier that our job now may be to consider carefully the timing of a policy move that we increasingly are seeing as necessary. Thank you.

CHAIRMAN GREENSPAN. Governor Phillips.

MS. PHILLIPS. Thank you, Mr. Chairman. The expansion is now entering its eighth year. The situation is starting to feel a bit surreal, perhaps even unbelievable. Every facet of the U.S. economy is surprisingly strong. GDP output continues to expand briskly. Housing activity is up. The labor market remains extremely tight, yet employers have managed to contain costs by productivity improvements, capital investments, and creative labor-management approaches. Throughout this process, capacity actually has expanded. To date inflation generally has been contained, although I would note that the spread between core commodities inflation and services inflation does remain. The oil price downturn is bad for some, but for others and in the aggregate it is helping to control costs.

Financial markets have been supportive of expansion. Stock markets, bond markets, and all forms of short-term financing including bank financing generally are available. The stock market may be too good to be true, and I must say that this is the first time that I have felt really uncomfortable about the market. The monetary aggregates also are indicating strong growth. I recognize that some of the growth in the aggregates may be the result of temporary factors and more generally may just be reflective of contemporaneous economic growth. Even so, the monetary aggregates are pointing to significant strength.

So far, the Asian crisis has on balance been more positive for the United States than negative. Indeed, the rest of the world seems to be relying on the United States as the engine to get their economies going.

I keep thinking that something has to give. The rate of economic growth in 1997 and the apparent rate of growth that we are experiencing in the first quarter are not sustainable. But where is the slowdown going to come from? If we started to see a deterioration in profits, that probably would be an indication that firms are no longer able to offset their increasing labor

costs. That in turn would surely trigger a stock market downturn, and we would start to see a diminishing wealth effect. Inflation could heat up, although I think that is a bit more unlikely in view of the absence of much pressure worldwide on commodity prices. But inflation could still heat up and that would cause a deterioration in aggregate demand. Again, as I said, I think that is fairly unlikely.

The Asian crisis could turn more negative. Indeed, although conditions seem to have stabilized in Thailand and Korea, it is hard to know whether or not some of the long-term changes that need to be put into place in those countries actually are going to occur. Unless conditions in those countries become more transparent, and I mean transparent Western style, reduced foreign capital for investment will limit their economic growth. Absent bank supervisory reforms and a shoring up of domestic bank balance sheets, the proverbial credit crunch will slow their recoveries. We say that there are cultural differences when we try to understand what is going on in Asia, but it is difficult to determine how these cultural differences are going to play out in a crisis environment and whether some of these countries are going to make the long-term changes that are needed to stabilize their economies. So, even though it appears that conditions have stabilized, at least in two of these countries, the jury may in fact still be out with regard to the long-term economic performance of those countries. Certainly, we cannot say that conditions have stabilized in Indonesia, and they have not yet started to improve for Japan. For the United States, the latter is a bigger risk.

For now, I think the balance of the risks seems to have shifted toward stronger growth. The slowdown from Asia is starting to show up, but it has not exerted much restraint thus far, and in fact it is hard to know how much of a restraining effect it will have. Inflation, which has been helped by weaker oil prices, has been quite well contained, but unless the expansion slows,

the traditional pressures from scarce resources, in labor markets in particular, will have to be passed on via higher prices.

CHAIRMAN GREENSPAN. Thank you very much. I will now call on Don Kohn.

MR. KOHN. Thank you, Mr. Chairman. Governor Phillips and a number of others mentioned money growth in their presentations, and I thought this might be one of those infrequent occasions when discussion of this subject would be helpful. I will begin with some comments on the surprising strength in money growth and use that as a lead-in to issues involved in the Committee's current policy. I will be using the chart that was distributed this morning.² My remarks will focus on M2 because that aggregate has been the one most closely associated with spending since deposit rates were deregulated in the early 1980s and, consequently, the aggregate most closely followed by the Committee and the staff over that period.

As can be seen in the upper left-hand panel, M2 growth has been accelerating over the last few quarters. The pickup in growth in the second half of last year and the first quarter of 1998 does not appear to be a result of increasingly faster growth of nominal GDP, at least based on the Greenbook forecast of current-quarter GDP.

Instead, as is evident in the upper right panel, velocity turned down in the second half of 1997 following several years in which a residual uptrend in velocity persisted, even after the major shifts of the early 1990s. And that decline seems to have become faster in 1998 despite unchanged opportunity costs as conventionally measured.

The middle panel lists a few hypotheses for why velocity may be declining. First, some special factors have artificially boosted M2 growth relative to spending toward the end of last year and early in 1998. These have included continued strong overseas currency shipments, enlarged mortgage refinancings, which tend to be associated with temporary deposits in liquid accounts, the effects of accelerated tax refunds and, perhaps, the recent buildup of balances in anticipation of outsized tax bills. Still, we believe that these special factors can account for only a small part of M2 growth in the fourth and first quarters and none of the surprise because we basically had anticipated them in January.

A second influence that may be giving an unusual boost to M2 growth is the flat yield curve. Savers sacrifice very little current return, reduce their exposure to capital loss, and gain liquidity when they de-emphasize longer-term fixed-rate investments in favor of liquid assets in M2. In fact,

² A copy of the chart used by Mr. Kohn is appended to the transcript. (Appendix 2)

almost all the growth in M2 in the last two quarters has been in its liquid components--money market funds and savings deposits. Moreover, we saw evidence of such a redirection of savings flows in accelerated runoffs of noncompetitive tenders at Treasury note and bill auctions late last year. But in recent months those runoffs have slackened a bit, and flows into bond mutual funds have been fairly robust, so such shifts probably do not account for the further pickup in M2 growth this year.

A third possibility is household efforts to rebalance asset portfolios. Although the ratio of M2 to GDP has been rising in recent quarters, M2 is becoming a much smaller proportion of household wealth owing to the tremendous rise in the market value of equities. In response, people could be diverting more current savings or the proceeds of securities sales to M2 to restore desired risk exposures. While this explanation is plausible, one has to wonder why such shifts have begun in the last few quarters when equity prices have been skyrocketing for several years.

Fourth, some scale variable other than GDP or wealth may be driving M2 demand, or current-quarter GDP may be underestimated. Income has been growing faster than published or estimated GDP, and so, too, in most quarters including the first, has private domestic spending. In the past, these alternative scale variables have been no better related to M2 over the long run than has nominal GDP. But our standard model does use consumption spending to explain short-run movements in M2, and people may be accumulating relatively large amounts of M2 to support current and future private spending, whose growth, owing to a widening trade deficit and damped government outlays, is outstripping that of GDP. And, as Mike Prell noted earlier, the rapid growth of employment in the current quarter may be telling us that GDP is stronger than estimated in the Greenbook.

Lastly, the money demand relationship has always been fairly noisy--even in previous decades when, in hindsight, it seems to have been well-behaved. Innovations over the past 20 years, which have made a broader menu of financial assets more readily and inexpensively available to households, should only have added to that noise. We have never been able to identify all the factors affecting M2 demand, especially over periods as short as a few quarters, and undoubtedly my list misses some that are relevant now. This uncertainty raises questions about the implications of unexpected variations in M2 growth over relatively short time frames for the Committee's objectives for spending or prices. As a consequence, since the early 1980s the Committee has been unwilling to tie its behavior too closely to M2 or to any other monetary indicator.

As you can see in the bottom panel, M2 growth over a year's time had a strong association with future spending in the 1960s and 1970s. But that relationship has weakened considerably in the 1980s and 1990s, even

outside the velocity-shift years of the early 1990s. The earlier leading indicator properties worked importantly through differential lags in the responses of money and spending to changes in interest rates. If, for example, the Federal Reserve, seeing money and economic activity growing too rapidly, raised interest rates, financial portfolios would be reallocated fairly promptly out of money, whose rates tended to adjust sluggishly, into market instruments, but spending tended to be trimmed much more slowly. Hence, money would weaken before the economy. For money to be a leading indicator through this mechanism, the Federal Reserve needed to react to contemporaneous or lagging indicators of the economy and it needed to move short-term interest rates substantially to affect opportunity costs. Since the early 1980s, the Federal Reserve has become increasingly more anticipatory, in effect changing short-term interest rates--and, implicitly, money stock growth--to head off swings in GDP, which were then more damped. And, of course, in the last few years the Committee has not had to move short-term rates very much, leaving M2 largely to fluctuate passively with contemporaneous spending. So it is not surprising that the reliability of M2 as a leading indicator has been considerably reduced.

That does not mean the monetary surge in 1997 and early this year can be ignored, aside from the possible implication that contemporaneous GDP may be higher than the staff is forecasting. The portfolio shift that has raised M2 relative to income results importantly from more accommodative conditions in key sectors of domestic financial markets over recent quarters. The decline in nominal long-term rates, which has flattened the yield curve and spurred mortgage refinancing, and the rise in equity values, which has elevated tax obligations and increased asset portfolios, have boosted both M2 and spending. And we haven't discussed M3, whose very rapid expansion is related in large measure to accelerating credit growth at depository institutions, which, in turn, is part of a broader pickup in the availability and use of credit. The relationship between money and current or future spending may not be very tight, but from this perspective strong growth of money reinforces the message from other financial market indicators that financial conditions are quite supportive of domestic spending, once we look past the level of the real federal funds rate.

It was those financial conditions, along with the lagged multiplier-accelerator effects of recent economic strength that led the staff to raise the level of spending throughout the forecast period. To some extent, the staff projection may simply be catching up to the Committee, but the recent upward revisions do highlight the risks in the outlook. Even in January, the forecasts of both the staff and FOMC members portrayed the economy as operating beyond most estimates of its sustainable potential, at least in the labor market. Obviously, the revisions accentuate that tendency, and in the staff forecast underlying inflation has assumed a more discernible upward tilt. Thus, the data on the economy and financial markets along with

forecast revisions would seem to argue for more serious consideration of a near-term firming of policy.

But there remain reasons why the Committee may want to wait. It was supply uncertainties--questions about whether the economy might be able to sustain faster expansion through faster productivity growth and a higher level of resource utilization than suggested by history--that deterred the Committee from tightening last fall, and those uncertainties have not been resolved. Despite a low unemployment rate and anecdotes of strains in labor markets, wage and compensation inflation still seems to be moving up only slowly. Price inflation remains largely quiescent, and a resumption of robust investment spending in the first quarter should keep industrial capacity ample. On the other side, disappointing profits in fourth-quarter data and first-quarter estimates, perhaps associated in part with weaker productivity performance, may be early signs of emerging cost pressures.

On the demand side of the economy, robust domestic spending has been expected to a considerable extent, and the questions have involved the coming offset from the foreign sector, which is just emerging in the data. The size and timing of the offset remain very uncertain, given the still unfolding drama in Asia and the scarcity of precedents for gauging its effects on the U.S. economy. In a fundamental sense the situation has not changed that much over the long intermeeting period. The Committee remains in the difficult position of waiting for a moderating influence of unknown dimensions, with the economy uncomfortably strong and ebullient financial markets feeding that strength--it's just that the economy is stronger and markets more ebullient than anticipated.

On the positive side, developments in train to support growth and contain inflation mean that the ill effects of either too much or too little external sector restraint are likely to be muted for some time. This may give the Committee some breathing room to gauge the economic situation, at least for a short time, without risking the need for substantially more disruptive policy action at a later date. The unusually favorable economic performance of the last few years is generating its own momentum: low and declining inflation already experienced will hold down inflation expectations, damping wage and price increases, even if economic expansion is strong and labor market pressures intensify. And robust growth has bolstered confidence and equity markets, supporting domestic demand and growth even if external demand weakens more than expected. The effects of this momentum are reinforced in the short run by the Asian crisis itself. The rise in the dollar and drop in oil prices on balance since last fall will add to restraint on inflation for a while. On the spending side, the drop in oil prices and the decline in intermediate- and long-term interest rates seem to be stimulating demand before the adverse effects of lower foreign income and higher dollar exchange rates are felt. In effect, financial

and commodity markets have anticipated oncoming Asian effects on real GDP, providing some near-term stimulus to spending. In this regard, the Committee is facing a combination of near-term stimulus and projected restraint similar to that associated with a fiscal policy tightening whose implementation is delayed but which has already reduced interest rates.

If the Committee decides to leave the stance of policy unchanged at this meeting, it still needs to consider the symmetry of the directive. Moving to an asymmetrical directive toward tightening would reflect a judgment, ultimately conveyed to the public, that information and analysis becoming available since the symmetrical directive was adopted in December have tilted the risks enough to make tightening a clear possibility in the not-too-distant future. Retaining a symmetrical directive would indicate that there remained enough uncertainty about the outlook at this point to cast significant doubt on this outcome.

Of course, a symmetrical directive would not rule out a near-term action--at the next meeting or earlier--if warranted by new information. Thank you, Mr. Chairman.

CHAIRMAN GREENSPAN. Questions for Don? If not, let me get started.

It is quite evident, as Governor Rivlin said, that the performance of this economy is about the best that we can possibly imagine. I suspect that I have been watching the economy longer than anyone around this table, so I can confirm that statement in terms of personal observation over an extended period. The economy's performance is absolutely unusual. It seems to be caught in the grip of a virtuous wealth-effect cycle. That is, the extraordinary domestic demand that we are observing is almost surely a spillover from the unbelievable uptrend in the ratio of wealth to disposable income that we have experienced over the past several years. As we know, the wealth effect has a lagged and cumulative effect that begins to flatten out only after there occurs a significant and evident slowing of wealth creation. There is no evidence of the latter. I think the Dow is up about 1,000 points so far this year.

Clearly, the situation is difficult to get into context because if we take the level of, say, the S&P 500 and decompose it into the riskless rate of interest, the projected rate of growth in

earnings, and, as a residual calculation, the equity premium, we end up with an equity premium that is at the lower end of the historical range of experience even if we accept the Street's estimates of quite extraordinary growth in earnings. While it is not as low as it was in the summer of 1987, it is quite low relative to any recent period and it has been moving down at a fairly dramatic pace. That in and of itself doesn't tell us terribly much until we look at the implications of the earnings expectations that are implicit in that structure. If we convert the earnings expectations for the S&P 500 into operating profits in the NIPA accounts, then profit margins, which have been rising considerably for quite a period of time, continue to rise indefinitely; they eventually break through to all time highs and still continue to rise. Everything we know about the way the system functions implies that that is an utterly unrealistic expectation.

The question, however, is how far the rise in stock market prices can go. We know from history that markets can be perceived as overvalued for an exceptionally long period of time. It is quite conceivable, as the Vice Chair says, that the extraordinary flows into equity mutual funds can sustain this market phenomenon for a while. But countering that is something that was not very evident the last time we met, namely, that operating earnings are beginning to come up short of forecasts, and indeed their growth rate clearly has begun to decline in the past several months. These are not the numbers that are showing up so far in the earnings per share of the S&P 500 companies because that index provides a biased estimate of total earnings. The S&P 500, by the nature of its selection criteria, picks up those companies that are growing most rapidly and whose earnings generally have been quite impressive. Nonetheless, there is no doubt that the earnings growth numbers are slowing down.

That means that for the first time in evaluating the unit cost structure of nonfinancial corporations, we are not looking at the phenomenon that I have referred to many times at these meetings of a very low inflation rate and stable or rising operating profit margins, the direct implication of which is that growth of unit costs is negligible. We are still seeing very low inflation. The estimates through the first quarter are about as low as we have seen for quite a while, oil obviously being a relevant factor here. But even apart from oil prices, we do not yet see any meaningful acceleration of inflation. The evidence of pricing power on the part of business is still lacking. There is no anecdotal evidence of which I am aware--and I have not heard any in the discussion here--that suggests a change in the suppression of pricing power. Indeed, in the Beigebook summary, I have forgotten the exact phrase, but it was noted that pressures on product prices were "eerily calm." That in fact is characteristic of what is going on at this stage. We have very little evidence of inflation, but we are beginning to see pressures emerge in the cost structure, and that obviously is one of the reasons why profit margins are beginning to slip.

Even though we continue to get declining unit nonlabor costs, we are beginning to see some acceleration, still not large, in unit labor costs. In the nonfinancial corporate sector, we are seeing an increase in hourly compensation at a rate of roughly 4 percent. That rate is not accelerating at this stage, and I suspect one of the reasons is that firms are using every novel way they can devise to keep compensation costs down. Obvious also are their efforts to improve productivity.

The productivity numbers are very rough estimates because we are measuring a whole set of product outputs from one set of data and a whole set of labor inputs from a different set. That they come out even remotely measuring actual labor productivity is open to question in my

view. Nonetheless, we do see some slowdown in the published data, although output per hour estimated through the first quarter of 1998 for nonfinancial corporate business still shows a 2.3 percent increase from four quarters earlier. That is down only modestly from a year ago but down significantly from the surge that we saw in the middle of last year, which surely was an aberration. As you will recall, BLS estimates that output per hour increased at a 6.3 percent annual rate in the third quarter of 1997. It just is not possible for productivity to increase that fast. I think the four-quarter average is more meaningful. Productivity gains in these data appear to be sufficiently strong to keep increases in unit labor costs down to an annual rate of about 1½ percent for nonfinancial corporations.

Basically, we are observing a very substantial wealth effect but one that has not yet spilled over to a significant extent into the product area, creating shortages of goods and services. As you know, there are none. The National Association of Purchasing Managers' survey indicates what I think is a record lull in reported shortages of materials. There is no evidence of tightness in facilities. There is exceptional tightness in labor markets, obviously, and if anything, they are getting tighter. We have a phenomenon that I don't think we have seen in the post World War II period. This economic performance is really different. I don't know how one would determine what it is, but there is some "X" factor, a missing variable in our basic models, that has to be there to explain why even with these exceptionally tight labor markets, we are only getting an increase in compensation per hour of slightly more than 4 percent and, more importantly, why pricing power is not evident in this situation.

Nonetheless, there is very little evidence to suggest that monetary policy is tight. We cannot explain why the underlying demands in the interest-sensitive areas of the economy are as strong as they are, and I will even acknowledge that maybe the weather has had some effect on

both housing and some sectors of the retail markets that are displaying more strength than one would expect, at least on a historical basis, given the level of short-term interest rates.

All in all, we have an economic performance that is essentially unsustainable. It is unsustainable in two contexts. One, the stock market as far as I can see cannot sustain its current strength. The aggregative virtuous cycle that is embodied in it cannot keep going without ultimately running off the track. There is no credible model of which I am aware that embodies all of this. In my judgment, echoing a good deal of what has been said around this table, unless either profit margins decline or some other developments break the back of this stock market surge in the very short run and take much of the strength out of the forces that dominate this expansion, we will have more inflation. Even so, the adjustment cannot happen very rapidly even though the economy could begin to go in a different direction. One alternative scenario is that the fallout from the Asian situation, which as far as the Greenbook is concerned is about to exert a significant effect on our economy, actually will do so. It is generally correct to say that the economies of Southeast Asia are very weak. The Japanese government estimates that industrial production will be significantly negative in February and March. The first quarter is very clearly much weaker than the fourth. I think that, if anything, the Japanese economy is in a fairly pronounced recession at this stage. That is also the case in Thailand and Korea where production has fallen very dramatically. The weakness associated with Asian developments has not yet reached these shores fully, but there have been some pricing repercussions and orders clearly have been affected. But it is by no means clear that even at its full force, as a number of you including Bill Poole have indicated, the Asian effect will be enough to undercut this expansion to an extent that drives it off track.

Therefore, in a sense responding to Cathy Minehan's question of when we will start to move, I believe that we are running out of time. I think that unless this system starts to self-correct fairly shortly, we will have no choice but to move. In the process, we could very well crack the stock market. We could affect a lot of things because this benevolent virtuous cycle probably has also created an increasing vulnerability in the sense that yield spreads have fallen to unbelievable numbers, the slack attitude of lending officers has become a potential concern, and the risks that people normally are worried about have tended to be ignored. All this means that if we have a sharp adjustment, it will occur at a time when the vulnerability of the economic system is far greater than is the case when we have a great deal of uncertainty. There is too little uncertainty in this system. Human nature has not changed and when it reasserts itself, things are going to look a lot different.

To translate all of this into policy, I think we ought to be moving back to asymmetry at this stage because developments since the last meeting have changed economic conditions enough to justify that. I do not think it is appropriate to move at this stage. Were we to do so, I believe we would create too large a shock to the system, which it would not be able to absorb quickly. More importantly, I don't think there is that much urgency. What we are observing can go on for a quite significant period of time. While I agree with those who say that product price inflation ultimately has to accelerate and something has to give at some point if the growth of effective domestic demand continues at the current pace, that is not necessarily going to happen very quickly. That's because the productivity numbers are reasonably strong and the absence of pricing power is still very much a factor in holding down inflation. It is by no means evident if we look, for example, at the chain-weighted GDP deflator or the domestic purchases deflator, that prices are in any sense accelerating. Indeed, the first-quarter estimate is the lowest we have

seen in this cyclical expansion. Part of the explanation obviously is oil, though I don't know what that part is. But as we discussed before, we just cannot take oil out of our inflation measures and make believe it does not exist; it is too big a factor in an economy. As I see it, the overall inflation rate has shown no evidence of accelerating at this stage. To be sure, the core CPI did show an uptick, but a good part of that is tobacco, which is no longer an open market product. While airline fares did go up and they are an open market product, we are not yet getting the inflation pressure. So, I think that we have to be, as the Vice Chair said, on a new alert because if this expansion does not slow down, we will have to start to move. I think the clock is starting to tick, and my guess is that unless the evidence of an Asian slowdown is fairly pronounced and/or the stock market goes in the other direction, we will be singing a different tune the next time we meet.

So, I would recommend and put "B" asymmetric on the table for consideration. I feel uncomfortable about switching back to asymmetry after having moved to symmetry so recently, but I think the real world has changed. Vice Chair.

VICE CHAIRMAN MCDONOUGH. Mr. Chairman, I support your proposal. I think it would be unwise to change our policy today, but what you have said and the general tenor of the comments around the table convince me that we will not hesitate to move when the evidence is somewhat more clear that that is the appropriate thing to do. For now, I believe that "B" asymmetric toward tightening is the right policy.

CHAIRMAN GREENSPAN. President Parry.

MR. PARRY. Mr. Chairman, I certainly support your recommendation of no change at the present time and I very enthusiastically support the move to asymmetry. It seems to me that the discussion strongly supports such a move.

I have a question. It relates to my recollection that when we talked about how we were going to handle the public announcement of a no-change decision, we discussed the possibility of making a statement to accompany such an announcement. If one thinks that economic developments are moving in a direction where it is likely that a change in policy would occur--say, at the next meeting--and given that you have stressed the importance of laying a foundation for a policy change, the adoption of asymmetry clearly could lay a foundation. But under our current procedures the asymmetry is announced two days after the next meeting, so the public is not put on notice on a timely basis. I wonder if there is some virtue to making a statement in our announcement about the strength of the economy.

CHAIRMAN GREENSPAN. That is an interesting question. I would appreciate hearing other comments on that. Vice Chair, do you have a comment?

VICE CHAIRMAN MCDONOUGH. If the economy continues to move in this direction between now and the next meeting, I think that we would have to begin preparing the way. I do not object to what Bob Parry is suggesting. Marginally, I would prefer that you do it in a policy speech.

CHAIRMAN GREENSPAN. That would be my inclination. The reason I would feel uncomfortable with a short press statement is that we could not leave it at that. The question would remain as to why we did it. If it appears that economic developments are beginning to move us toward a policy change, I think we will have a lot more to explain. I might add, incidentally, that we cannot be perceived as moving to thwart the stock market. That may be implicit in our analysis of what the economy is doing, but a move to curb the buildup in stock market wealth is a very difficult issue to put on the table. We have to be very careful about that.

The argument is that the wealth effect is driving domestic demand, which in turn is driving the product markets, but it cannot be other than that, if I may put it that way.

MR. PARRY. Mr. Chairman, I can appreciate the viewpoint that Bill McDonough expressed, and I can understand that there may be opportunities for you to lay that foundation. It is obvious that if we do not change our current procedure, then going to asymmetry does not accomplish what we want. Asymmetry would serve to alert the public only if a decision to change our policy were delayed beyond the next meeting.

CHAIRMAN GREENSPAN. President Boehne.

MR. BOEHNE. I think we have an unsustainable situation. Unless we are quite fortunate and get some offset to inflationary demand pressures other than through policy action, we indeed will have to face up to making a policy adjustment and probably more than once.

On the issue of preparing the market, I think a policy speech by you at the appropriate time is far superior to a two or three sentence press release. There are a couple of reasons: One, I think that if you need to make such a policy statement, we have to be prepared to follow fairly quickly with policy action. We don't want to get ourselves into a "cry wolf" situation where we talk and do not act. So, I would prefer that you wait until it looks as though a policy action needs to take place. Your speech would prepare the markets at that time, and a policy action would follow. Ultimately, it is actions, not words, that count, and words will only matter if they are followed by action. Second, I would suggest that in addition to the usual macroeconomic rationale for action, such a policy speech should stress that we like good times, that we like people to have jobs, and that we are acting to sustain the good times. The point was made earlier that the lower echelons of the labor force are now beginning to participate in this prosperity, and they would be the first to be unemployed if things went awry. I think it is important that we also

make a point like that because it helps to give a balanced view of our policy. It indicates that we are not against growth and against lower echelon workers making progress and, indeed, that we are moving to sustain such progress. I would urge you to add that to the usual macro analysis.

CHAIRMAN GREENSPAN. President Broadus.

MR. BROADUS. Mr. Chairman, I expected the general tone of this meeting to be more bullish than it was at the February meeting, but the bullish comments today have exceeded my expectations! So, it will not surprise you or anyone else that I would still prefer to take action today. Governor Gramlich's comments about operating with a funds rate target resonated with me. It is certainly true that we have had some movement in the real federal funds rate, but we have pegged the nominal funds rate for almost two years. Obviously, if we do not move the rate itself at this meeting, I would certainly support very, very strongly your recommendation for asymmetry.

I have a lot of sympathy with the point that Bob Parry made, and I was in fact going to raise the same issue. I think that if we do move to an asymmetric directive, it would be desirable to announce that decision now rather than waiting for six or seven weeks. I believe it is important, to use Bill McDonough's metaphor, for us to let people know that the guardian is there and the guardian is awake. I know there are some problems with this suggestion, but one could make a good case for routinely announcing the directive language tilt concurrently rather than shortly after the following meeting. The tilt language is after all a routine part of the directive; there are questions about this practice, but we do in fact follow it. I don't see any compelling reason not to release it concurrently.

CHAIRMAN GREENSPAN. Wouldn't it be better to start doing that when it does not matter?

MR. BROADDUS. It would be more convenient, no doubt about it. Maybe the best way--

CHAIRMAN GREENSPAN. If we are to establish a precedent, it seems best to do so when it does not create problems.

MR. BROADDUS. That's a good point. It may be that the best way to go about preparing the markets currently is for you to make a speech of some sort where you bring this matter up. But I think that we might want to consider later the other alternative of announcing something immediately after each meeting.

CHAIRMAN GREENSPAN. President Jordan.

MR. JORDAN. Thank you. Referring back to something I said earlier about the opening sentence in the general paragraphs of the directive, I think we do need to make a change there.

CHAIRMAN GREENSPAN. I think that already has been done.

MR. JORDAN. Okay.

CHAIRMAN GREENSPAN. After having listened to your earlier comment, I think wise heads around here made a change.

MR. JORDAN. I agree with Ed Boehne about what to include in our public comments concerning the reasons for our policy actions. I still think that our actions in early 1994, properly viewed, prevented the recession of 1996. What we are faced with today is how to prevent the next credit crunch and recession of the year 2000. We will have enough other problems in the year 2000 without having to deal with a recession and a real estate debacle. I thought that your remarks, Mr. Chairman, developed a persuasive case for acting now. I am not particularly concerned about the stock market. I agree that it is not a reason to do something, but in my view

it also is not a reason not to do something. I believe that reasons for taking action would be the excessive growth of the whole constellation of money and credit aggregates, the upward revision of expectations about the growth of economic activity, and what is going on in the banking industry and especially in the real estate markets. A ¼ percentage point increase in the federal funds rate now would deliver a very important message. We are going to get some first-quarter numbers that will make it obvious to everybody why we acted. I am concerned that on the basis of the published information, the case on the surface for a move may not be as compelling by the middle of May as it is today, so I would strongly prefer taking action today.

CHAIRMAN GREENSPAN. President Hoenig.

MR. HOENIG. Mr. Chairman, I can accept your recommendation as you presented it. There is information that suggests we can wait: the relatively high real federal funds rate, fairly low and trendless inflation right now, and bond markets that are signaling benign inflation expectations. But there is also an issue of timing. I believe we should move fairly soon, if not at this meeting, because of the information on the economy: Our labor markets are obviously tight, aggregate demand growth remains quite robust, monetary growth is accelerating even though there is uncertainty about velocity, and finally, there are increasingly frequent reports of large amounts of global liquidity seeking investment outlets and accelerating the inflation of assets. These developments do give me some pause and some concern. So, yes, I can wait, but I have a sense of some pressure to act on a relatively prompt basis.

CHAIRMAN GREENSPAN. Governor Meyer.

MR. MEYER. Mr. Chairman, I support your recommendation for no change in the federal funds rate and for an asymmetric posture.

I have some considerable sympathy with the notion that, rather than just expanding the policy announcement, we have an immediate release of the directive that would indicate--

CHAIRMAN GREENSPAN. You mean the whole directive?

MR. MEYER. The whole directive. On the other hand, I think that proposal deserves a full discussion of the pros and cons before we move forward. If we decide to go in that direction, we might want to do so at a time when the directive would not create a surprise when it is released. There are some relevant issues. A change from symmetry to asymmetry sends some indication of partial tightening or easing to the market, and our willingness to move from symmetry to asymmetry may be affected by whether or not we are going to announce that move, depending on what impact it is going to have on the market. Another consideration, Mr. Chairman, would be that your signaling to the markets in a speech would allow you to provide more explanation, and I think that would be desirable at this point also.

MR. HOENIG. Mr. Chairman, could I comment on whether we should make such an announcement? In earlier discussions, I have expressed some sympathy with what President Parry was talking about regarding announcements because I believe more information is of value. However, like others, I think that if we release a statement on this occasion, we will have set a precedent and we will have to continue making statements going forward. I do think that requires a fair amount of discussion of what the impact will be and how we want to manage that. For that reason, I would also encourage you to prepare the markets in a sense through a very carefully drawn up speech that outlines the issues that we face and gives the market more information than would a short statement after each meeting.

CHAIRMAN GREENSPAN. President Poole.

MR. POOLE. I am very surprised that in recent months the markets have responded so little to the stronger than anticipated economic data. The markets have absolutely solid expectations that we will not move. I think it is very unfortunate that that situation faces us as we sit here today. As an outsider, I also have been puzzled about the asymmetric directive because it appears six weeks or more after the time it is adopted. It may turn out that the message is not what we want at the time it actually appears. I think we know what kind of message we would like to give today and would expect from the remarks that the Chairman intends to give at the appropriate time--namely, that the markets need to be prepared for a tightening in the future. The asymmetric directive, if released quickly, could be a mechanism for providing that message. I hope that we can deal with this issue very promptly. I agree that we need to discuss it, but I hope we can have it on the agenda quite soon and perhaps make a decision on this at the next meeting. In my view, disclosing the symmetry or asymmetry promptly might have some benefits. But I find it puzzling that if we adopt an asymmetric directive today, which I am prepared to support, it will not be released until after the next meeting.

CHAIRMAN GREENSPAN. I think we ought to put it on the agenda for the next meeting. That issue has not come up in that form until very recently, and I think it is worthwhile discussing it.

MR. POOLE. I, like everyone else around the table, am well aware that the inflation numbers look very good. But I am concerned that we are at a very vulnerable stage. We could have some bad news and once a rise in inflation gets going, particularly if our policy has gotten behind, it is going to be very hard to catch up. So, I think we want to move before we see any worsening in the inflation numbers. That is what is going to keep it all under control.

CHAIRMAN GREENSPAN. President Stern.

MR. STERN. I, too, support your recommendation, Mr. Chairman, and I share Bill Poole's concern about the timing of the release of the asymmetry. We now release it at a point when it does not do us any good, and I think the implication of that is what Ed Boehne was talking about. You can give a policy speech that elaborates on our current attitudes.

CHAIRMAN GREENSPAN. President Moskow.

MR. MOSKOW. Mr. Chairman, I agree with your recommendation. A lot has been said already, and I don't want to repeat it. In my view, the one thing that may well undo this expansion and all its benefits to society is for inflation to start to accelerate and require us to take some very severe action. So, I think it is absolutely essential that we look ahead and that our policy be preemptive. The last thing we want is to be caught in a situation where we are behind the curve. I do think it is important to lay the foundation for a policy action, and I think the suggestion of a policy speech that you and Bill McDonough made is an excellent one. I also want to associate myself with Ed Boehne's comments about the nature of the speech. I thought that he had some very good suggestions about how to explain our objectives in terms of the broad-based benefits from sustainable economic growth that we want to see continued for the benefit of all segments of our society.

I think we should review how we use asymmetric or symmetric directives. I believe we should have a policy for that. We should use symmetry in a systematic way, and I would prepare the markets for any changes that we may make in our disclosure of that aspect of our policy.

CHAIRMAN GREENSPAN. Governor Ferguson.

MR. FERGUSON. Mr. Chairman, I agree with your recommendation of "B" asymmetric. I think it is important that we signal that we are both vigilant and want to maintain the gains that already have been made.

When we removed the asymmetry from the directive in December, I asked one of the other Board members why we did not announce the change then. I was told that it was because we would then be announcing two different policies at the same time. I wasn't sure I understood that explanation then, and I'm not sure I understand it now, but I do think that--

MS. RIVLIN. It sounded okay!

MR. FERGUSON. It was one of many explanations! I believe, however, that the issue deserves more consideration. So, I would not rush into announcing now, but I do think we should discuss the issue at the next meeting. I recognize that we will have some explanations to make when we move to tighten policy because, while inflation pressures are building, there also are low inflation numbers and low inflation expectations. In my view, all of these considerations point more in the direction of a policy speech as opposed to simply a quick announcement after the meeting. I would associate myself with what President Boehne had to say with respect to making sure that people recognize the context in which our policy action is undertaken and to remind people that the economic benefits we have achieved to date have come from low inflation. I believe it is important to keep those two things in mind.

I guess the only other concern I would have relates to our trying to think through our policy strategy going forward. It might be appropriate at some meeting, perhaps the next if it looks as though we are on a new policy trend, to be quite clear with ourselves as to exactly what our strategy is. This is what I think Governor Gramlich was referring to earlier.

CHAIRMAN GREENSPAN. President Guynn.

MR. GUYNN. Thank you, Mr. Chairman. I, too, support your recommendation and I am pleased with the return to asymmetry. I take heart, as I guess everyone else does, from our resolve not to wait too long.

Just to finish that thought, I guess it is obvious in what has been said by Bill Poole, Gary Stern, and others that not only do we not have a way to signal our move to asymmetry today, but the minutes that will come out in a couple of days will show us in a symmetrical stance at the February meeting. This development seems to cry out for some kind of mechanism to correct what I think will be a misimpression that we would prefer not to give in the next couple of days.

SPEAKER(?). That's right.

CHAIRMAN GREENSPAN. Governor Kelley.

MR. KELLEY. Mr. Chairman, I strongly support your recommendation.

Relative to the discussion about a possible announcement, I would have a very strong preference for not making one today. That preference is based on a longer-term reason and an immediate reason. The longer-term reason would be the one that has been expressed around the table, namely, that this would have a precedential impact and one that we should consider carefully, not just rush into. I will say parenthetically--we are not going to debate that issue today--that I have very great reservations about the whole idea.

More immediately, I believe that if we were to make a new type of announcement today that the market has not seen before and does not expect, it would come as quite a shock and be very confusing. Why are they doing this? Why did they make this announcement and not change policy? I can see the potential for a reaction of fairly major proportions that would not be at all what we are setting out to do. So, I would be very hesitant about that.

CHAIRMAN GREENSPAN. Governor Rivlin.

MS. RIVLIN. Mr. Chairman, I support your recommendation, but I think we should remind ourselves that, with the exception of Bill Poole, we have all been here before. The situation has changed and we have a new view of the outlook. It is not inconceivable that we will be back in six weeks when something, presumably developments in Asia, has weakened the expansion and we may not be quite as sure as we seem to be today that everything is moving in the direction of an overly strong economy. But I certainly agree that that is how it looks today.

I also have a lot of sympathy with the suggestion to announce our asymmetry decision immediately. I think we all wish that we had already adopted that policy so that we could say something about asymmetry in our announcement today. But if we change our announcement policy in midstream without any prior discussion, it probably would be better to raise the fed funds rate today than to do this peculiar and unexpected thing.

I also would like to stress the importance not just of your making a policy speech, but that there be a series of policy speeches with all of us weaving into our remarks more about how we feel. I would suggest that the emphasis should be on our worries about speculation, loose credit, and other concerns that people can relate to rather than saying that we think the economy ought to be restrained because we are very worried about tight labor markets and poor people earning more money. That sounds silly when you say it that way, but sometimes we come across as though our real worries are tight labor markets rather than the objective, as Bill McDonough said earlier, of keeping the labor markets tight and retaining the benefits of full employment for the future.

CHAIRMAN GREENSPAN. Governor Phillips.

MS. PHILLIPS. Thank you. I think we can hold off for now. I do not see any immediate pressure to act. But unless the economy cools off, I believe we will have to tighten.

With respect to symmetry or asymmetry, I think that if we were to act in the intermeeting period, we would have a telephone conference anyway, so I'm not sure that the type of symmetry we adopt means too much. In that vein, I would not vote against asymmetry. I think a policy speech probably is better for now, but I agree with President Boehne that we should be prepared to act shortly after that speech. I also agree that it is the sustainability of economic growth that is the issue, and that is what should be emphasized in our speeches. I believe that it probably would be useful to have a discussion to consider the possible release of the directive after each meeting. I have not at this point thought through the pros and the cons, but such a discussion might clear up the question of whether symmetry or asymmetry means anything. So, I look forward to that discussion.

CHAIRMAN GREENSPAN. President McTeer.

MR. MCTEER. I support your recommendation.

CHAIRMAN GREENSPAN. President Minehan.

MS. MINEHAN. Mr. Chairman, I came to this meeting prepared to vote for an increase of 25 basis points in the federal funds rate, and I also came prepared to dissent if we did not at least move to asymmetry. I am glad that your recommendation is to move to asymmetry. I support it, but I am concerned that we continue to face the difficulty of explaining a tightening move in the context of declining price trends. Of course, our expectations are that those price trends will turn around over the course of the period during which our current monetary policy has an effect. I also am concerned about what you have so eloquently described as the vulnerability in financial markets and what President Poole has described as the lack of

uncertainty in those markets. I think we face a real risk of feeding the speculative excess that will ultimately come to haunt us if we do not move soon. That may still mean moving when we have broad price trends that do not suggest major inflation upticks. I frankly believe, along with I think at least one other member of the Committee, that moving now might be easier than moving later, given the transitory effects of Asia. But, again, I am willing to go along with your proposal.

I have felt for some time that an announcement of no change is as much a policy move as an announcement of a change. So, when we do not change our policy, I think it would be helpful to go beyond saying at 2:15: "the meeting ended at such and such a time." If we can figure out a way to say in one or two sentences why we made a policy change, we could figure out a way to say in one or two sentences why we did not make a policy change and what our general policy attitude is.

CHAIRMAN GREENSPAN. That could be part of the discussion that we will have at the next meeting because it is part of the same issue.

MS. MINEHAN. Right, and that takes me to the policy speech proposal. I know we have been commenting on these issues in policy speeches, and I agree with Alice Rivlin, Ed Boehne, and others who have talked about the context in which to describe our policy actions. But I am a lot more comfortable with policy speeches after a move than before a move. I worry about the latter. What are we doing here if we are going to telegraph what we will be doing before the fact rather than explaining it after the fact? I think we are better off if we avoid a stance where all of us are trying to telegraph what we are doing before we actually do it.

CHAIRMAN GREENSPAN. Governor Gramlich.

MR. GRAMLICH. Mr. Chairman, I will support a no-move, asymmetric directive.

To see if I have mastered Fedspeak, if somebody had proposed that we raise the fed funds rate by 25 basis points, I would have supported that, too! I am worried, as I said, that we could get ourselves in a position of being too rigid on the funds rate. I do not see that 25 basis points is that big a deal. It is not going to have a fundamental effect on the boom or put a lot of workers out on the street. So, I think that a 25 basis point increase could be justified, but I will support a no-move, asymmetric directive.

I do think we ought to discuss releasing the directive at the earliest opportunity. I agree that if we were to change our procedures now, it would cause a lot of uncertainty and turbulence, and there is no reason to do that. But we ought to discuss that issue as soon as possible. We would be in a little better shape, as Governor Rivlin suggested, if we had a precedent for announcing an asymmetric directive today. So, I think we should prepare for the future.

Let me say one other thing about this issue. I believe, Mr. Chairman, that when you give policy speeches--and I read a lot of those before I became a member of the Board--there is some feeling, at least I had it, that you are speaking for yourself. Maybe that was naive on my part. But I think one advantage of getting the word out sooner is in a way to take the heat off you by indicating that all of us stand behind the policy or at least that the FOMC stands behind the policy. In my view, that would be an advantage of getting the word out sooner. So, I would like to discuss that proposal at an early date. I wish we could do it today. I accept that we cannot, but I would like to see that change.

CHAIRMAN GREENSPAN. Okay. I think we have a broad consensus around "B" asymmetric, so would you read the directive.

MR. KOHN. Excuse me, Norm. On that first sentence of the directive, Mr. Chairman, one possibility would be to keep essentially the words that were used in the last directive. It would say, after changing a few words in that sentence: "The information reviewed at this meeting suggests that economic activity continued to grow rapidly during the early months of 1998."

CHAIRMAN GREENSPAN. That would be accurate.

MR. BERNARD. The wording of the operational paragraph is on page 14 of the Bluebook: "In the implementation of policy for the immediate future, the Committee seeks conditions in reserve markets consistent with maintaining a federal funds rate at an average of around 5½ percent. In the context of the Committee's long-run objectives for price stability and sustainable economic growth, and giving careful consideration to economic, financial, and monetary developments, a somewhat higher federal funds rate would or a slightly lower federal funds rate might be acceptable in the intermeeting period. The contemplated reserve conditions are expected to be consistent with considerable moderation in the growth of M2 and M3 over coming months."

CHAIRMAN GREENSPAN. Call the roll.

MR. BERNARD.

| | |
|-------------------------|-----|
| Chairman Greenspan | Yes |
| Vice Chairman McDonough | Yes |
| Governor Ferguson | Yes |
| Governor Gramlich | |

MR. GRAMLICH. Do we have to have the "slightly lower" phrase? Am I out of order? [Laughter]

CHAIRMAN GREENSPAN. That is the conventional rhetoric.

MR. GRAMLICH. Yes, but--

CHAIRMAN GREENSPAN. We have been butchering the English language in this directive for years, but let's not change it just yet. Why don't you bring that up at a later meeting? [Laughter]

MR. GRAMLICH. On that advice, I vote "yes." [Laughter]

MR. BERNARD.

| | |
|-------------------|-----|
| President Hoenig | Yes |
| President Jordan | No |
| Governor Kelley | Yes |
| Governor Meyer | Yes |
| President Minehan | Yes |
| Governor Phillips | Yes |
| President Poole | Yes |
| Governor Rivlin | Yes |

CHAIRMAN GREENSPAN. Our next meeting is May 19th. We adjourn for lunch.

END OF MEETING

APPENDIX 1

Notes and charts used by Mr. Fisher in his presentation

Summary, Manager's Notes
FOMC Meeting March 31, 1998

1. G-3 short-term, forward interest rate curves remain relatively flat.
2. Greed eclipses fear in asset markets, except in Japan.
3. The flat forward pricing of short-term interest rates reflects a "clearing price" between divergent views about the direction of the Committee's next move, not a conviction about the likelihood of steady policy.

Q: Why hasn't a risk premium, associated with this uncertainty, been more evident in the Treasury yield curve?

In general, expanding risk appetites have consumed it.

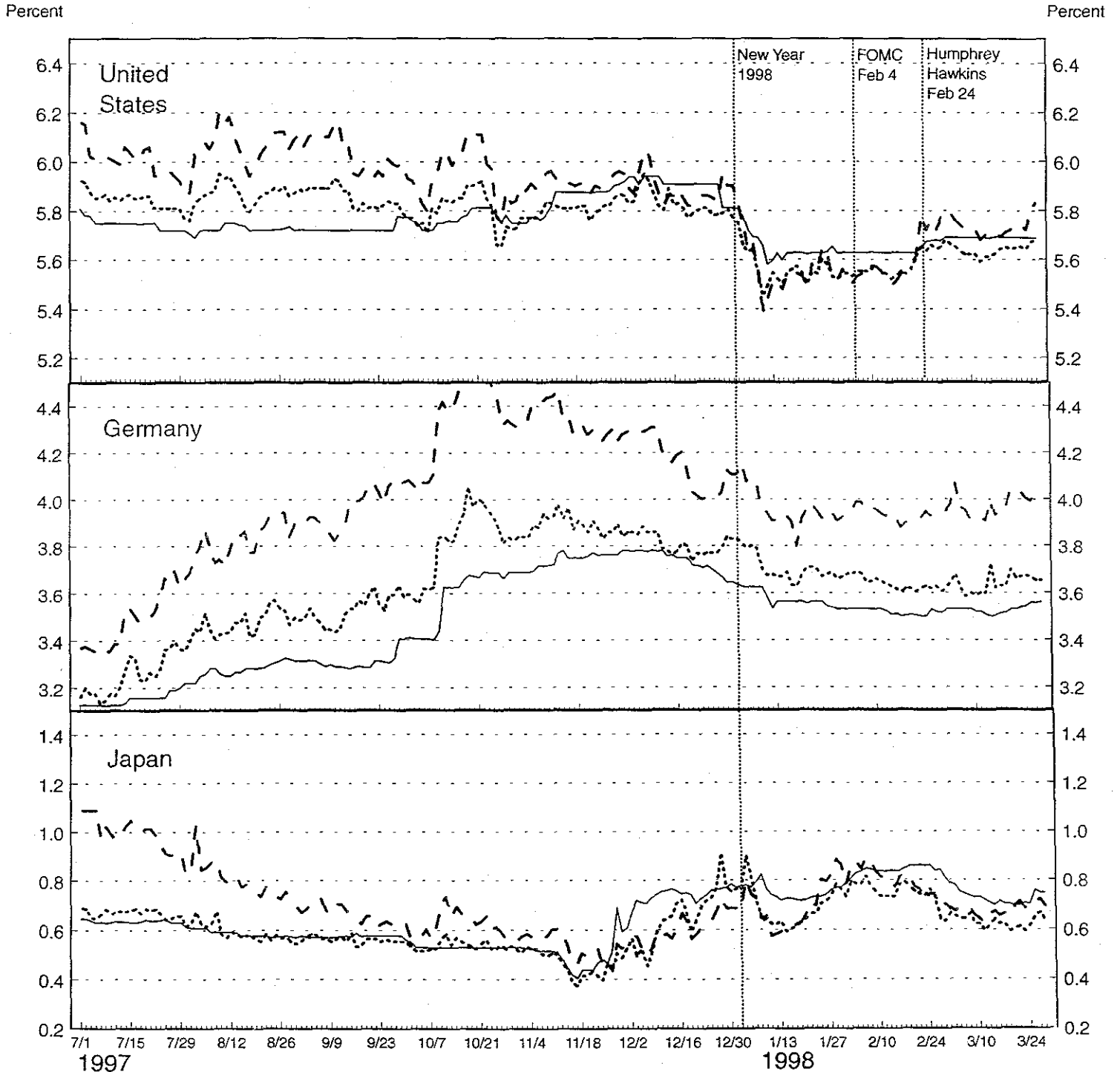
In particular, reductions in Treasury supply (both actual and anticipated), combined with the flat, forward money market curve, have recently been encouraging dealers to extend duration, tending to flatten the Treasury yield curve.

4. The Desk is preparing for the heavy tax inflows of April and May to cause a sharp rise in the Treasury balance leading, once again, to the need for much larger operations than normal.

3-Month Deposit Rates July 1, 1997 - March 27, 1998

Current Euro-deposit Rate and Rates Implied by Traded Forward Rate Agreements

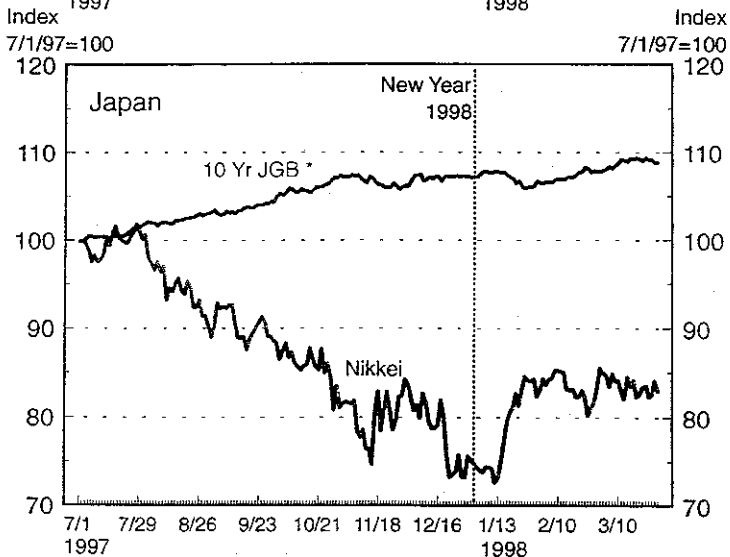
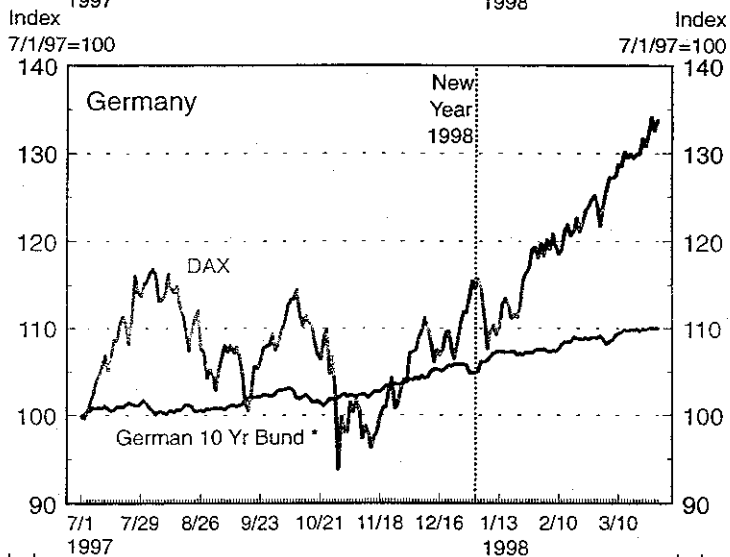
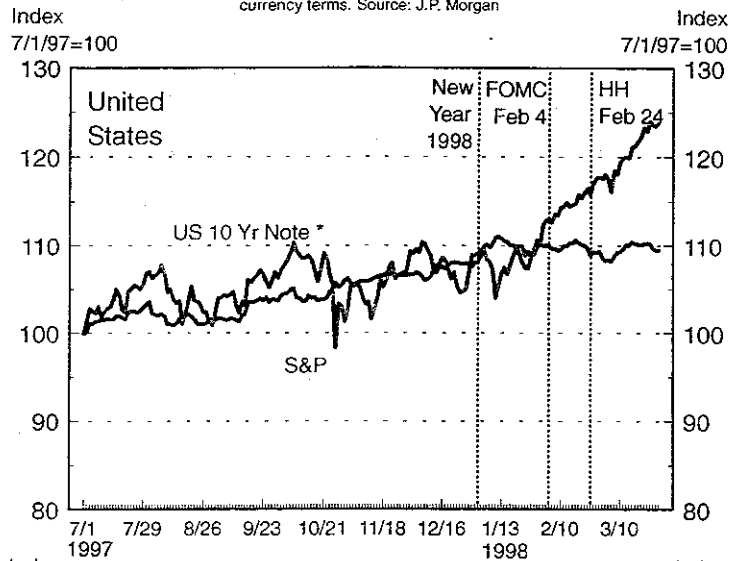
| | LIBOR Fixing | 3-mo. forward | 9-mo. forward |
|---------------|--------------|---------------|---------------|
| United States | ———— | | ----- |
| Germany | ———— | | ----- |
| Japan | ———— | | ----- |



Greed eclipses fear, except in Japan.

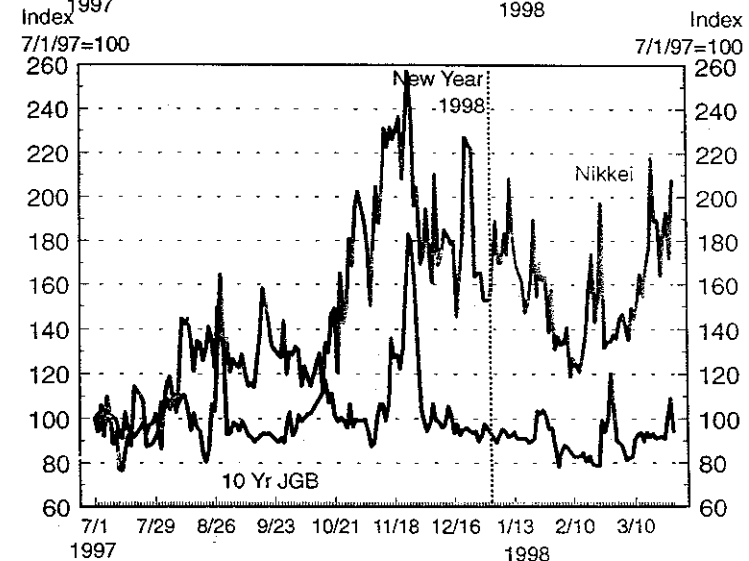
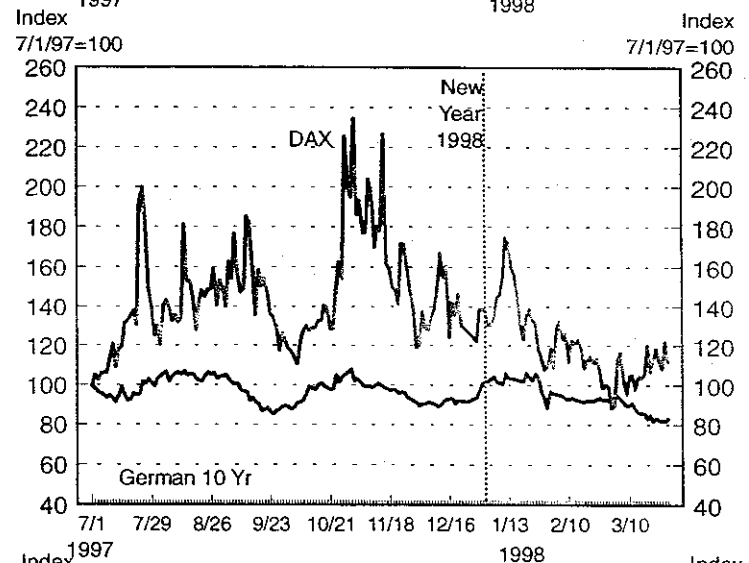
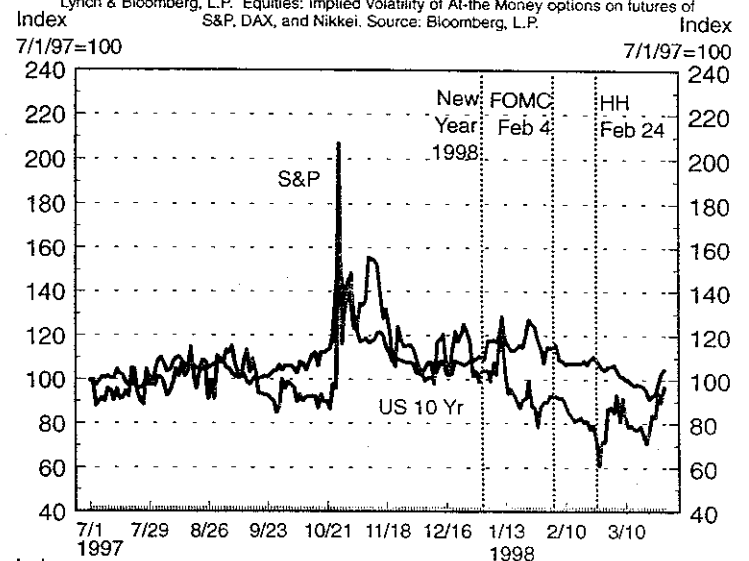
Re-Indexed G-3 Equity Indices and
Total Return Bond Indices * Performance
(Rebased to July 1, 1997)

* U.S., Germany, and Japan 10 Yr Constant Maturity Total Return Indices, in local currency terms. Source: J.P. Morgan



Indexed G-3 Option Implied Volatility
on Equity and Bond Futures *
(Rebased to July 1, 1997)

* Bonds: Implied Volatility of At-the-Money options on futures of 10 Yr bonds. Source: Merrill Lynch & Bloomberg, L.P. Equities: Implied Volatility of At-the-Money options on futures of S&P, DAX, and Nikkei. Source: Bloomberg, L.P.



--- OLD PARADIGM ---

Growth needs to be moderate, or slowed, to avoid a rise in inflation.

--- NEW PARADIGM ---

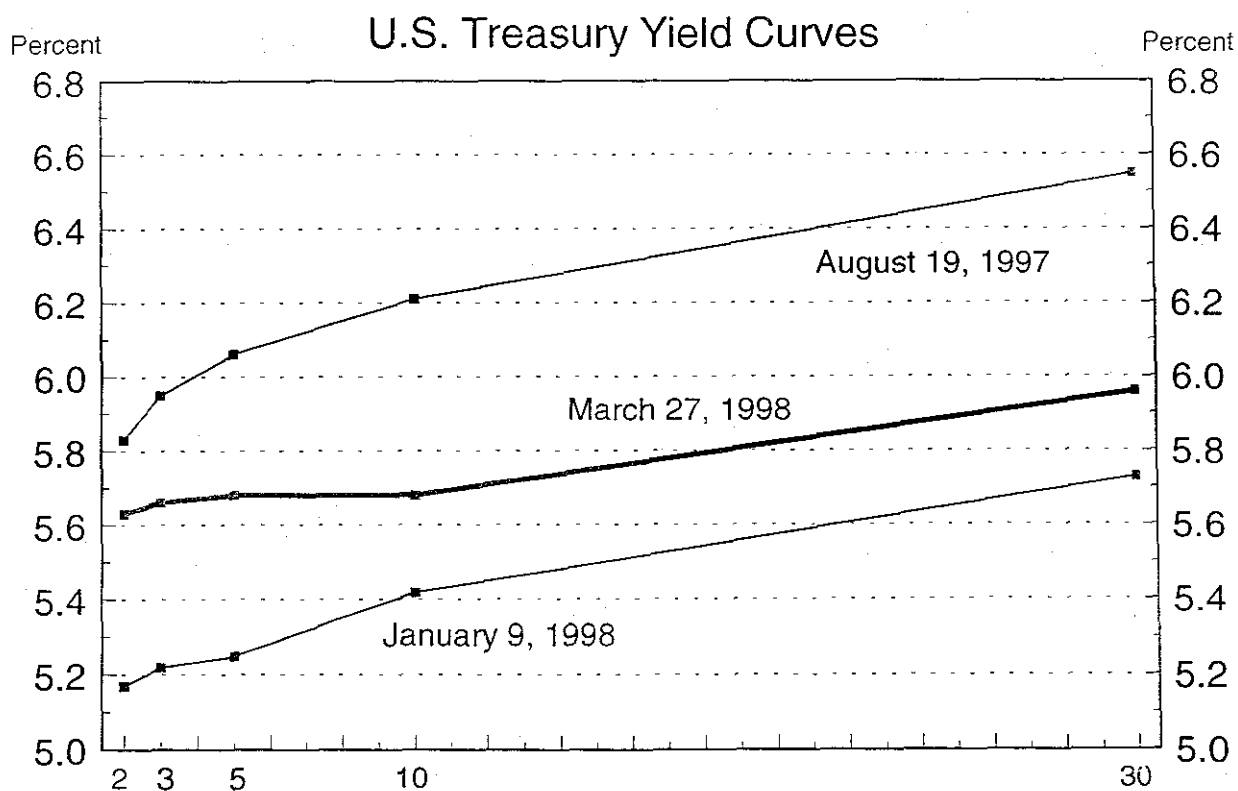
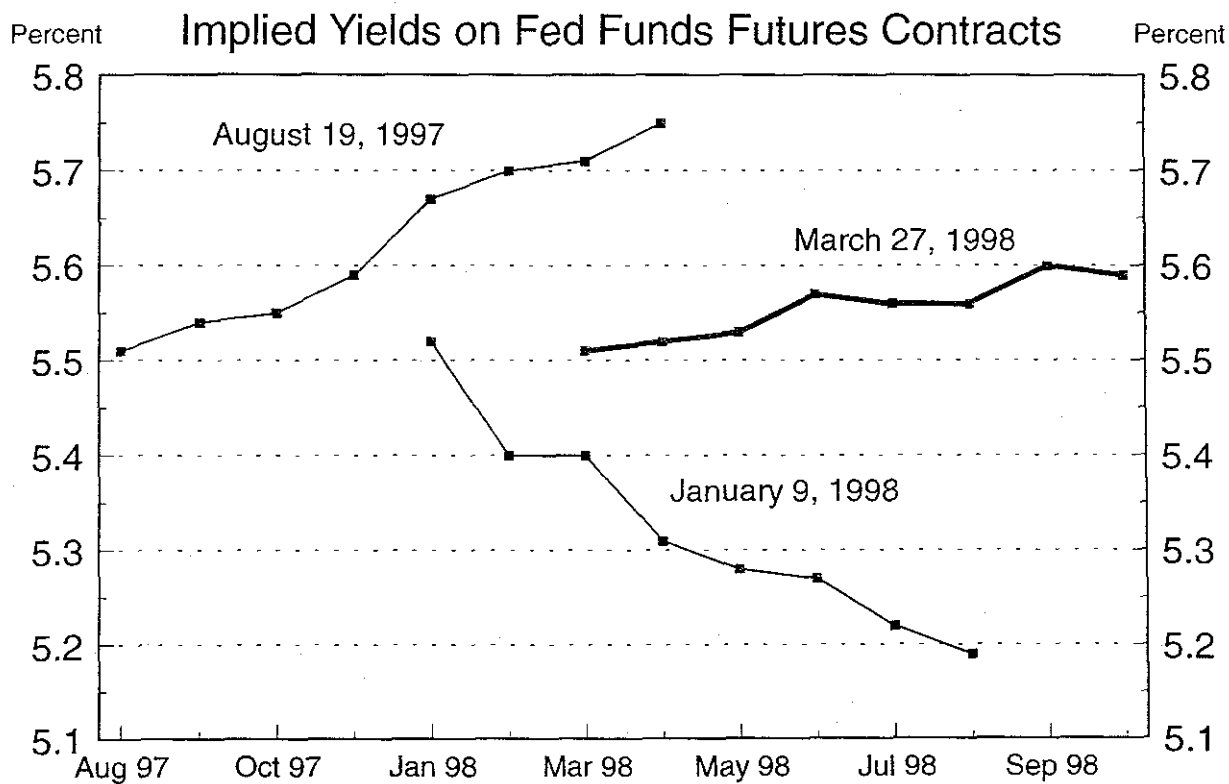
Growth can be strong, even accelerate, without a rise in inflation because of investment, productivity growth, competition and technological innovation.

August 1997

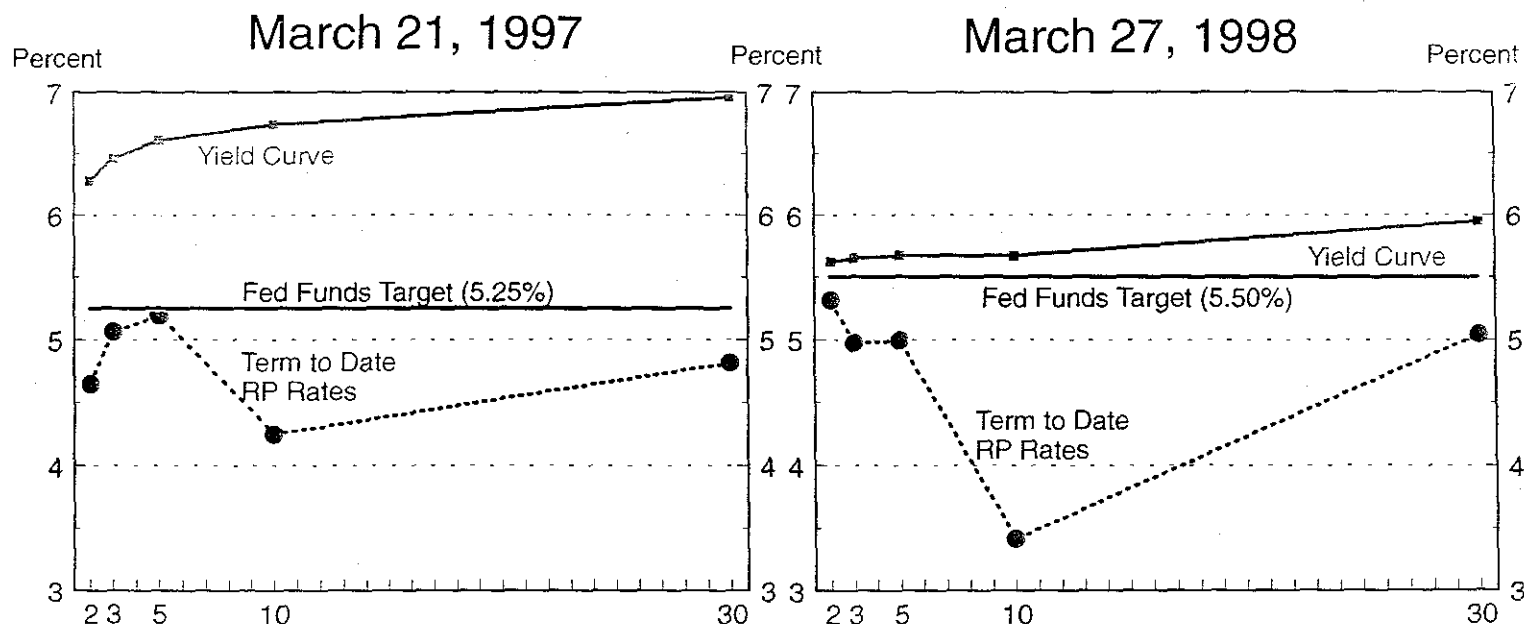
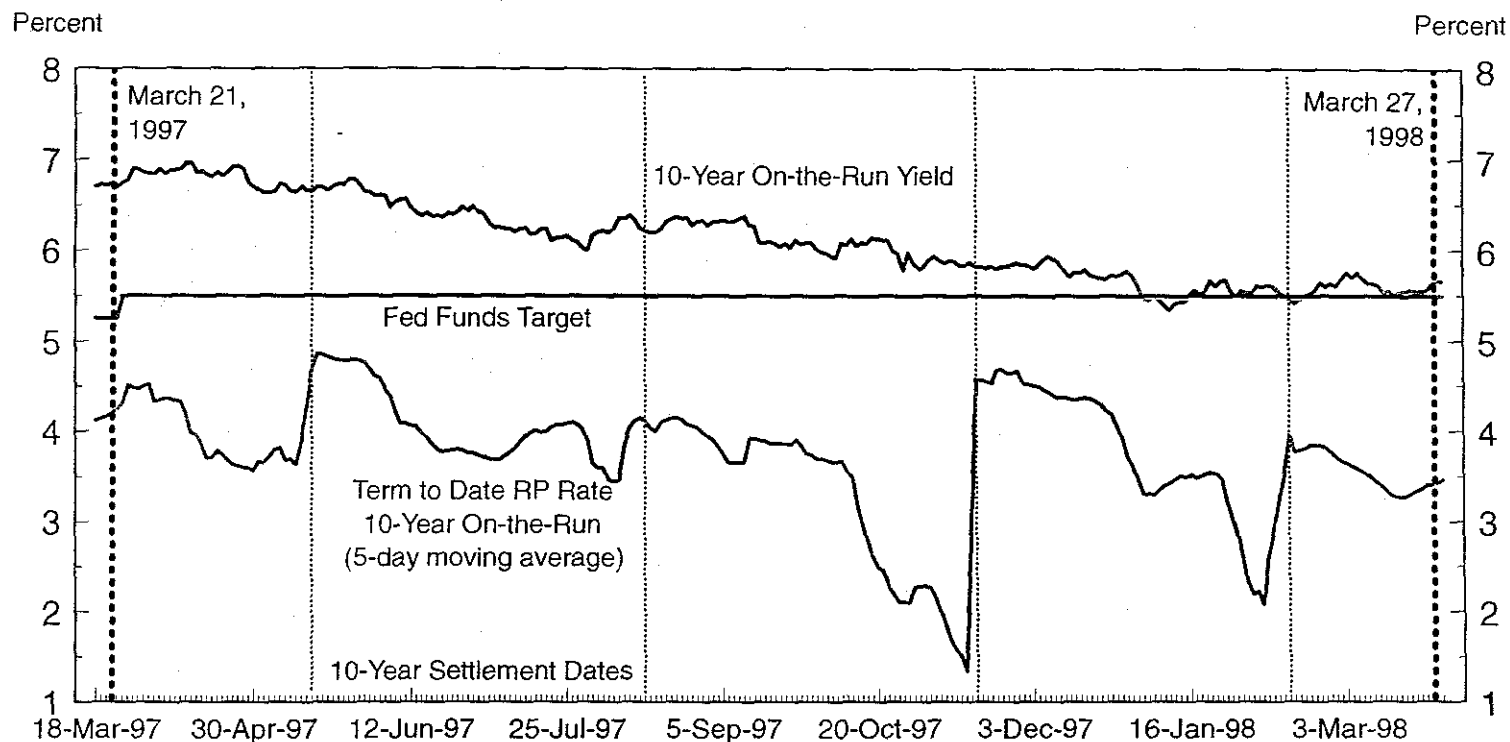
| | <u>Pessimist</u> | <u>Optimist</u> | <u>Optimist</u> | <u>Pessimist</u> |
|---|---|--|--|--|
| View of the economy: | INFLATION is about to break out! It's hiding in the lags. | Inflation is probably coming; but how soon is hard to tell. | It's a new era: productivity growth is taming inflation. | DEFLATION is here! There's no pricing power. Global capacity glut looms ahead. |
| View of the Fed: | Behind the curve; providing too much liquidity. | Doing a good job; maybe they can pull this off for a few more quarters | Doing a great job! Greenspan is a genius! Maybe they can pull this off forever | Way too tight; only making the deflation worse. |
| Response to low inflation and strong activity (e.g., 8/13 PPI and retail sales) | Sells stocks short; sells bonds short at low yields. | Buys stocks and bonds on dips; sells them on rallies. | Buys loads of stock and some bonds whenever possible. | Sells stocks short; buys Treasuries. |

NOW

| | | | | |
|------------------------------------|---|---|--|--|
| Portfolio consistent with outlook: | Leveraged: 60% <u>short</u> stocks 40% <u>short</u> bonds | Cash, trading in & out of: 60% <u>long</u> stocks 40% <u>long</u> bonds | Leveraged: buy and hold 60% <u>long</u> stocks 40% <u>long</u> bonds | Leveraged: 60% <u>short</u> stocks Unleveraged: 40% <u>long</u> bonds |
| Result to date: | CRUSHED | Keeping up with the indices | Beating the indices | NEGATIVE RETURNS: losses in short stock positions overwhelm profits in long bond position |



Positive Carry of On-the-Run Treasuries



Positive Carry in Basis Points

| | 2 Year | 3 Year | 5 Year | 10 Year | 30 Year |
|---------|--------|--------|--------|---------|---------|
| 3/21/97 | 164 | 140 | 142 | 250 | 215 |
| 3/27/98 | 31 | 68 | 68 | 226 | 91 |

1997

Forecast and Actual Federal Budget Receipts

| January - March | Forecast (\$Billions) | Percent Error* |
|-----------------------|--------------------------|-------------------|
| Treasury as of Oct 96 | 338.5 | 3.0% |
| Board as of Dec 96 | 333.0 | 4.6% |
| FRBNY as of Dec 96 | 333.0 | 4.6% |
| Actual | 349.1 | |

| April - June | Forecast (\$Billions) | Percent Error* |
|-----------------------|--------------------------|-------------------|
| Treasury as of Feb 97 | 443.3 | 10.7% |
| Board as of Mar 97 | 460.0 | 7.3% |
| FRBNY as of Mar 97 | 452.0 | 8.9% |
| Actual | 496.4 | |

1998

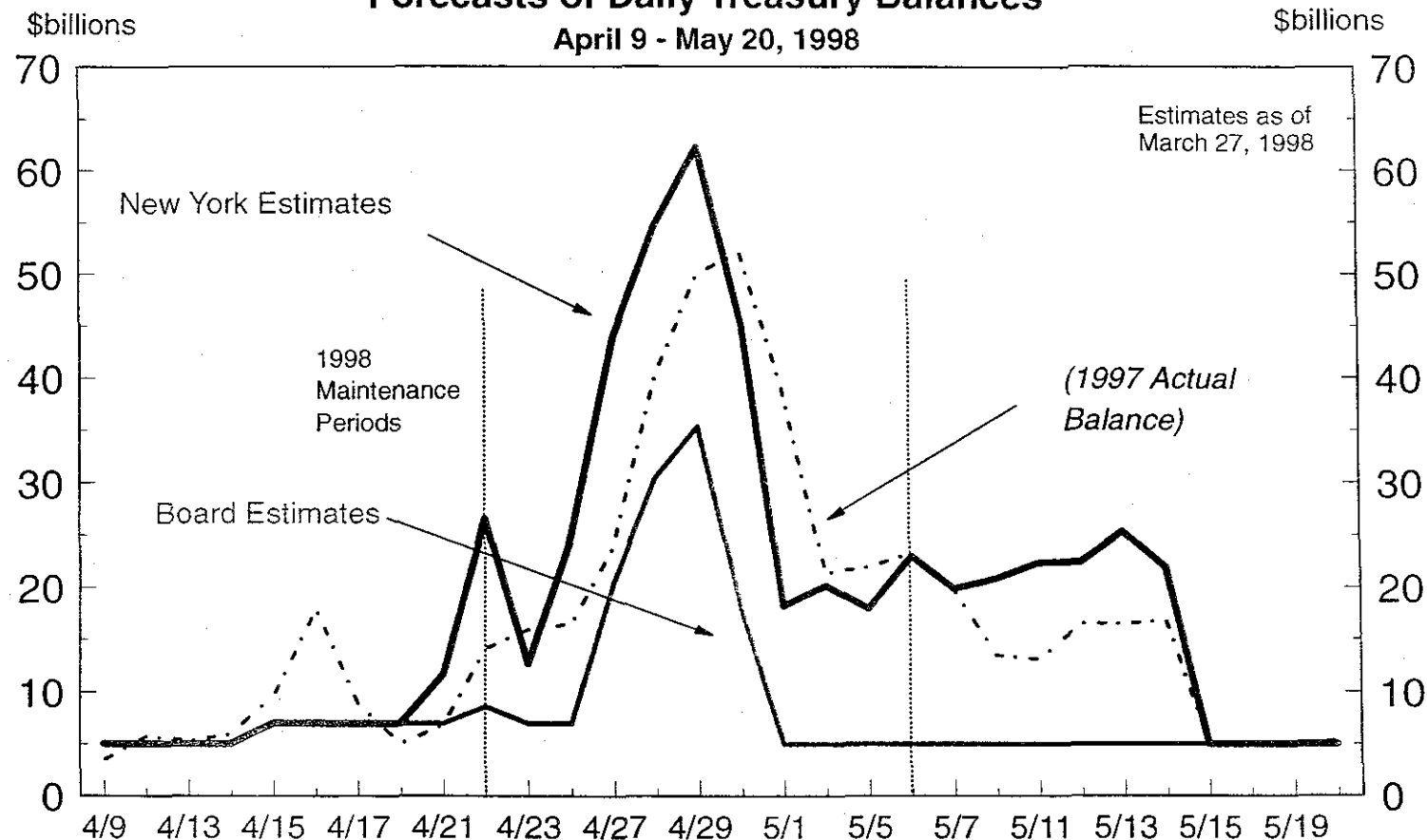
| January - March | Forecast (\$Billions) | Percent Error* |
|-----------------------|--------------------------|-------------------|
| Treasury as of Oct 97 | 376.0 | 0.3% |
| Board as of Dec 97 | 369.0 | 2.2% |
| FRBNY as of Dec 97 | 366.7 | 2.8% |
| Preliminary Actual | 377.2 | |

| April - June | Forecast (\$Billions) |
|-----------------------|--------------------------|
| Treasury as of Mar 98 | 525.6 |
| Board as of Mar 98 | 516.0 |
| FRBNY as of Mar 98 | 547.6 |

*Percent error = ((Actual-Forecast)/Actual)*100

Forecasts of Daily Treasury Balances

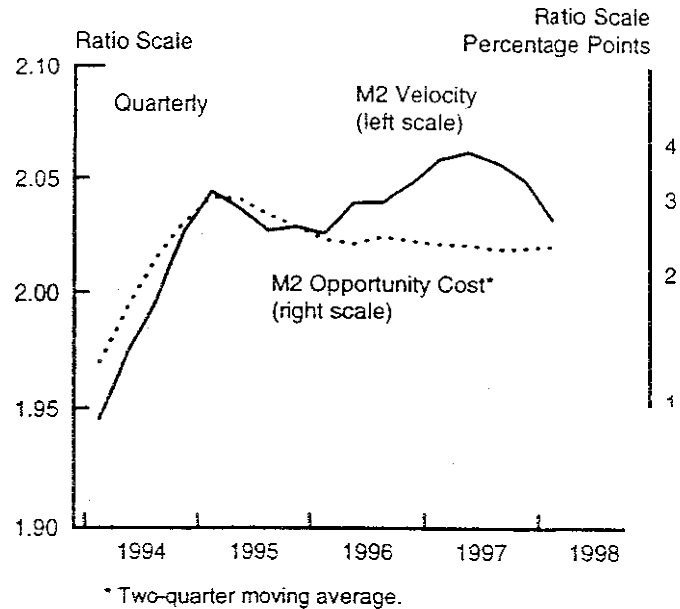
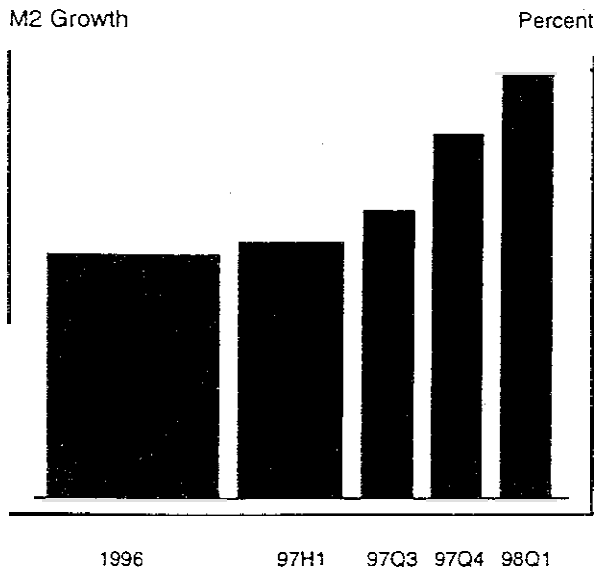
April 9 - May 20, 1998



APPENDIX 2

Chart used by Mr. Kohn in his presentation

M2



Possible Reasons for Velocity Decline

- Special factors
- Flat yield curve
- Asset portfolio rebalancing
- Income or spending scale variable
- Noise in the relationship

M2 Growth and Nominal GDP Growth(Q4 to Q4)

